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CHIEF MEDICAL EXAMINER - CORONER SAN FRANCISCO, CALIFORNIA

SEAL OF THE CITY AND COUNTY OF SAN FRANCISCO
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ANNUAL REPORT

July 1, 1981 - June 30, 1982

BOYD G. STEPHENS, M.D.
Chief Medical Examiner-Coroner
7th and Bryant Streets
San Francisco, California 94103

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ty and County of San Francisco
Chief Medical Examiner · Coroner

Honorable Dianne Feinstein, Mayor
and Members of the Board of Supervisors
City Hall - Civic Center
San Francisco, California 94102

Dear Mayor Feinstein and Honorable Supervisors:

It is our continued posture to represent a non-biased, scientific medico-legal investigation with fair, accurate and authoritative determination of the cause, circumstances and manner of death - as set forth and required by California law. To this end, we continually try to improve the quality of training for our personnel, and for the personnel of other law enforcement agencies. We continue to upgrade the equipment, especially the instrumentation needed for detecting and accurately identifying small concentrations of drugs and chemicals in body fluids of the living and the dead. Also, we continually seek to improve our medical and scientific capabilities through updating of medical and scientific training. Since so much emotional and legal responsibility falls on our shoulders, not to improve and maintain would be inconsistent with good forensic medicine.

The practice of forensic medicine, however, is not limited to the dead, but also relates to the community, to its public health and welfare, and to the families that grieve. In addition, it involves the victims and suspects of violence, such as sexual assault and felony manslaughter. Many times, due to the bias of some individuals who are convinced that the dead are not significant, that the department is only limited to the dead, and that there is no justification for good death investigation, the funding, equipment, and personnel which are required to keep pace with the expanding judicial system and with the constantly changing criminal world are very hard to obtain. In a society that now spends 60-70% of its annual budget for the criminal and judicial system, it makes no practical sense to build that expenditure on poor and inadequate evidence collection and analysis. Proposition 8 and certain recent Supreme Court decisions further accent the importance of careful and accurate scene investigation, and of complete and appropriate collection and analysis of evidence. As our society now slowly changes to recognize the victim of crime, even more pressure will be brought on the detectives of crime - the finders of fact. It is imperative that no innocent person be found guilty, and that no guilty go free! The victim of the crime - alive or dead deserves no less; the suspect on trial demands nothing less.

This annual report is the review of one department involved in investigating and solving questions of death, whether they relate to a court trial, the health of a community, or the prisoner in the dock. It reviews the performance of the past year, presenting the data representing deaths of all manners, and the work involved. It reflects, slightly, those investigations and analyses performed on the living, where the science and art of forensic medicine apply to the injured or the suspect. As requested, this report also presents a statement of a management nature - where we are now, and a one, three and

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five year management plan for growth, development, and reconstruction of our physical and scientific facilities. The proposed changes will enable us not only to do the job required here, but to expand and perform fee-for-service work for other communities and law enforcement agencies, thereby reducing the ad valorem costs to our County.

Sincerely,

Boyd G. Stephens, M.D.
Chief Medical Examiner-Coroner

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INTRODUCTION

The Medical Examiner-Coroner is appointed by law to many responsibilities, the foremost of which is the investigation and certification of a variety of deaths including all deaths of other than natural causation, and any apparently natural deaths in which no physician can reasonably state the cause. The Medical Examiner can utilize any and all medico-legal investigative techniques, including autopsy, to establish both the medical cause of death, and mode or circumstances of death (natural, accident, homicide, suicide or undetermined).

The deaths which must be reported to the Medical Examiner-Coroner, as required by various sections of the Government, Health and Safety and Penal codes are as follows:

1. Homicide - known or suspected
2. Suicide - known or suspected
3. Following accident or injury (whether the accident or injury is the primary cause or contributory; death occurring immediately or at some remote time)
4. Medical attendance of less than 24 hours
5. No physician in attendance
6. Physician unable to state the cause of death (must be unable, not merely unwilling)
7. Poisoning (food, chemical, drug, therapeutic agents)
8. Occupational or industrial deaths
9. All deaths where a patient has not fully recovered from an anesthetic, whether in surgery, recovery room, or elsewhere
10. All deaths in operating rooms
11. All solitary deaths (unattended by physicians or other person in the period immediately preceding death)
12. All deaths in which the patient is comatose throughout the period of the physician's attendance
13. All deaths of unidentified persons
14. Grounds to suspect that the death occurred in any degree from a criminal act
15. Contagious disease - known or suspected - and constituting a public health hazard
16. Deaths in prison or while under sentence
17. In the continued absence of a physician (not having seen the patient in 20 days prior to death)
18. Associated with a rape - known or alleged - or crime against nature
19. Related to or following abortion - known or suspected
20. Involving drowning, fire, hanging, gunshot, stabbing, cutting, starvation, exposure, alcoholism, drug addiction, strangulation or aspiration

Additional mandated responsibilities include protection and safekeeping of property belonging to deceased individuals; conducting inquests when indicated; maintaining proper public records; making reports to other agencies; identification of deceased persons; interment of indigent dead; and many other death-related activities.

Statement of Current Management and Scientific Position

It is apparent that the physical facilities of the San Francisco Medical Examiner-Coroner's Office, unlike those in so many other communities, are well-designed and adequate for performing the work and accomodating the workload for this population. However, there is a shortage of personnel in both scientific and administrative positions. Some of this shortage can be resolved by a reduction in redundant and unnecessary work. Also, a major difference can be made by microfilming records, as well as by shifting from our current office procedures to more modern techniques such as CRT and computer units. Much administrative time in this office is spent typing and preparing repetitive forms and preparing and maintaining repetitive records. Computer assistance would facilitate the preparation of many reports. The office is understaffed to the point that most reports are delayed and mistakes are increased. Rather than management duties, the management staff is required to perform typing and filing duties to get the work load done; the professional staff has to perform many administrative duties, taking time away from the medical or forensic work they are trained and paid to do.

I. ADMINISTRATIVE

Currently, the office is short two, and potentially three positions, depending upon the impact on this office of Proposition 8 and the consequent increase in consultations and retrials. There is need for an executive secretary. The Chief Medical Examiner currently types his own letters, reports and correspondence taking time from his administrative and forensic responsibilities. There is a need for a junior management assistant to handle payroll, inventory and purchasing and to interface with departmental administrative needs. This position is needed because the work load of the management assistant is tremendous, frequently requiring overtime and weekend time. An additional medical transcriber is needed due to the anticipated increased demand for the rapid preparation and production of forensic reports for court necessitated by Proposition 8.

II. INVESTIGATIVE

Scene investigations are currently performed by 10 deputy coroners on a 24-hour, 7 day basis. Deputy coroners are peace officers. Typically, they receive 4,000 cases for investigation per year, representing approximately 50% of the annual deaths in the community.

The deputy coroner conducts an investigation with the purpose of determining, first of all, whether the death is within the jurisdiction of the office in accordance with Section 27491 of the California Government Code. If the case is determined to be under the medical examiner's authority, s/he makes a scene investigation, and interviews family and other witnesses to obtain information which will support the medical cause of death and, most importantly, to determine if there is any basis for the death being classified as suicide, accident or homicide. In any of these potential cases, s/he may be required to record the scene in diagram, report and photograph. S/he may collect evidence such

as fiber, firearm, notes or other material. S/he is required to make a judgement, based on interpretation of the evidence, as to the potential for death at hands of another. Should there be a reasonable potential of a homicide, s/he is to call for the forensic pathologist, homicide investigators, and the crime laboratory before the scene is further disturbed. S/he is to protect the scene - to preserve evidence, as well as the property of the deceased. S/he is to determine the extent, if any, of contamination of the scene by paramedics, police officers, family, or other, specifically as it may pertain to the criminal investigation. S/he examines the body for trauma, and determines the extent and nature of that trauma at the scene in order to ensure the proper investigation that should follow. S/he takes liver and environmental temperatures, and makes other observations mandatory for an opinion on the time and place of death. Should there be indications of infectious disease, appropriate precautions must be observed. If observations support that death may be the result of a sexual assault, a specific immediate work-up for the collection of the evidence, unique to that type of crime, is required. The recognition and collection of hair, for example, may be vital to the proper adjudication of that case. Hit-and-run and other vehicular cases, now prosecuted as straight felony cases rather than vehicular manslaughter, require an intensified investigation similar to that for homicides because of the new importance of the potential court hearing. The responsibility for identification of the dead, and the accurate tagging of the body, as well as the assured protection of the property of the deceased, are all initial responsibilities of the deputy. Therefore, all ledgers, tags and forms must be accurate and properly positioned. Any necessary interagency contact must be timely and proper. Specific requests by other law enforcement agencies must be acted on or transferred to the appropriate section in the office that will assume that responsibility. The clothing must be either properly reviewed or left undisturbed for further criminal investigation. Fingerprints must be taken unless evidence about the hands, such as gunshot residue or fiber evidence, preclude that collection at the time. In addition to safeguarding the evidence, the deputy must properly remove the body from the scene, and seal, secure or release the residence, as appropriate. These are critical steps; if physical evidence is not recognized at the appropriate time, and is not properly collected, photographed or protected, it will typically be lost for any other collection. This will then adversely affect court presentation of the case. There are circumstances unique to each crime scene which, if known to the next individual collecting evidence or working on that case, would favorably affect the manner in which he or she examines the body, collects the evidence and performs appropriate analyses. Therefore, the scene of the death is critically important, and must be properly investigated.

The deputy coroners do not receive appropriate training to perform this work. They do not receive specific training on the recognition and collection of evidence. They receive no training on report structure and preparation. There is no training in environmental hazards, toxicants, rescue or safety. They also are not provided with appropriate equipment for investigation or special equipment, such as flashlights or raincoats, for working in inclement weather or in dark, secluded, restricted or potentially dangerous places. It seems unlikely that a $10,000 a day court case would be built on such a foundation, but that is the common situation, and it must be changed. These inadequacies must be corrected. Better training and equipment must be available for the investigators.

The number of deputy coroners is adequate for the current work-load. If, however, the expected increase in court appearances associated with Proposition 8

requirements occurs, we will need one additional deputy to adjust for the resulting scheduling problems. Current policy does not pay a deputy for a court appearance, which is contrary to California law. There simply is no budget money. Therefore, every possible action is taken to avoid the deputy having to go to court. This is self-defeating, in the aspect that the work of the deputies and their investigative efforts are not fully appreciated. It also produces real evidence and procedural problems for the District Attorney and Public Defender. As more emphasis is placed on the court room presentation of evidence, the collection and documentation of that evidence must be subjected to closer scrutiny Therefore, under Proposition 8, it will most likely be required that all appropriate witnesses are present in court, including the deputy coroners. An additional deputy coroner must be available to fill in for the deputy coroner who is testifying in court.

III. TOXICOLOGY

There are well over 70,000 common drugs and chemicals available on the west coast. Toxicological tests involve the analysis of samples for drugs and poisons. The results of these tests, both positive and negative, assist in the determination of cause of death. Forensic toxicology is concerned with prescription drugs as well as with underground or illegal compounds, many of which are new on the street. Industrial and environmental chemicals and materials are also common forensic problems. This specialty field differs from hospital toxicology, but the requirement for exacting analysis with unquestionable accuracy and specificity is extremely high.

The toxicology department in this office is also involved in fee-for-service work for other law enforcement agencies, analysis of specimens from homicide suspects, suspects of other major crimes, persons accused of parole violation, felony manslaughter-driving cases and others. These latter samples are all from living persons, and all represent medico-legal cases frequently requiring expert court testimony for the purpose of interpreting the test results. Research grants to evaluate the presence or absence of toxins and drugs in the community are also performed in our toxicology department.

Our toxicology laboratory has made some major advances in the past few years. Current funding includes capital improvement money to expand the toxicology laboratory space. However, we have only the minimum instrumentation necessary to perform forensic toxicology analyses. For thirty years, the senior toxicologist (who owned his own laboratory) performed the analyses that we could not do at this office at his own facility. This complicated chain of custody and quality control problems. However, for the time period involved, these problems were not major considerations. Now, that person has retired and the laboratory must be independent. Therefore, we must invest in good quality instrumentation and trained personnel to perform these analyses.

It is our plan that testing of specimens received from outside of San Francisco county will generate significant revenues to help offset, in large part, the ad valorum tax base for the department. Surveys have indicated that there is a significant market which is potentially available. In order to generate this revenue, the department must be able to perform accurate and rapid testing. To offer this fee-for-service work and to continue to obtain grants, we must have the proper equipment and staffing. Currently, staffing is short a Forensic Toxicologist position which was deleted from the budget because of Proposition 13 reductions. Funding of that position, plus a change

of the laboratory manager/research coordinator position from part time to full time, and the addition of the necessary instrumentation, would bring this department up to the necessary capability.

IV. PATHOLOGY

Staffing in this department is adequate for the work-load, working six days per week. Some of the equipment needs replacement or updating. The tissue processor, microtome, spectrophotometer and chemistry equipment require replacement. The microscope requires replacement and updating to photomicrography standards. Our X-ray processing should be automated.

V. AUTOPSY FACILITIES

Staffing is adequate in this department. In the past we have had a part time person working from 4 to 8 P.M. This was an advantage to us because it allowed autopsies to extend into the late afternoon; it was an advantage to the funeral directors and families because the patients could be picked up and funeral preparations started the day of the autopsy. If possible, we would like to have this staff position reinstated.

This department needs a considerable amount of instruments and equipment to perform forensic autopsies properly. This includes surgical instruments, autopsy saws, equipment to better work with infectious cases, and photographic equipment to document autopsy findings for potential court room presentation or as evidence in a criminal hearing.

VI. INQUEST DIVISION

This division is considered to be adequately staffed for the current work-load.

VII. FORENSIC DIVISION

The current work-load on this department will not allow for additional court work responsibilities. Therefore, an additional position for a board certified or board eligible forensic pathologist is required. This position would also expand our teaching capability with consequent increased exposure of law enforcement agency personnel to proper crime scene investigation. This exposure and the resulting reduced pre-court and investigational difficulties would help to offset the costs of this position.

ONE-YEAR PLAN - 1983-1984

This plan is based on the completion of the following stages during 1982-83:

1. Completion of toxicology expansion with new laboratory space
2. Procurement of authorized equipment for pathology laboratory
3. Staffing of part-time laboratory manager/research coordinator position
4. Maintenance of current staffing level

The major goal for 1983-84 is the continued upgrading of the toxicology department. Instrumentation is the primary need. This includes the following:

Graphite furnace or flameless atomic absorption
HPLC chromatography
Radioimmunoassay
Recording spectrophotometer
Auto-injection equipment for current or new GLC
Replacement of electron capture detector with new equipment
Replacement and updating of current gas chromatography equipment with state of the art instruments
Replacement equipment with direct on-line capability with tie in to police computer for report preparation, availability and library capability
Replacement of light microscope with double headed instrument with automatic exposure equipment for microphotography
Addition of walk-in refrigerator space to accomodate the expected increase in specimens for toxicology testing

Note: Many of these instruments require special installation, special preparation equipment, such as dilutors, storage and disposal facilities for waste, and expendable supplies.

THREE YEAR PLAN

This plan is predicated on procurement of adequate equipment, instrumentation and staff to perform excellent quality forensic medicine and to have the capacity to expand the fee-for-service capabilities. Attainment of these capabilities depends on the following:

Staffing of permanent full-time position for a laboratory manager/research coordinator.

Initiating an active advertisement and competitive program for obtaining toxicology work from law enforcement agencies outside of San Francisco City and County. We believe that such a program could be expected to generate gross revenues of $200,000 to $500,000 per year.

Maintaining the current level or slightly increasing the level of forensic pathology and forensic medicine consultations with expected gross revenues of $40,000 to $50,000 per year.

Increasing the amount of medical and forensic research performed in the department. Besides being uniquely able to gather basic information on a wide variety of conditions existing in our community, to survey for the presence or absence of disease, and to monitor trends of drug use and abuse, we are able to do many types of work in the community. While research projects usually do not bring money in to the department, they do create jobs, gather valuable medical knowledge, and may provide equipment and instruments that this office otherwise could not obtain. Since much of the data pertaining to traumatic and other types of unnatural deaths in San Francisco originate in this office, we should develop and enlarge our research capabilities.

Changing all office equipment to CRT with capability of modum interface with central facilites, i.e. City Hall. This would allow direct interface with the Controller, Purchaser and Budget offices, as well as reduce the time delays and problems associated with indirect contact and inter-office distances.

Converting record-keeping systems to microfilm. Although there is a significant initial start-up cost. the long range cost savings (for top quality paper for permanent report preparation and for binding into permanent books) and the problems of having only one copy of these legal documents will more than pay for this service. Microfilming of records would free up storage space and costs, and would allow several copies of records to be available at a number of stations at the same time. Recovery and search of records would be easier and more convenient. At least one printing unit is included in this proposal so that the sale and availability of these documents would not be reduced.

Replacing the office furniture. Most of the seating equipment, which is used 24 hours daily, is worn beyond repair. A systematic program for replacing and upgrading this equipment should be initiated during this period.

Replacing the inner-office communication system. The current system must be replaced with an appropriate unit.

Making capital changes in the facilities. Flooring in the main office and public entrance way should be replaced during this time period.

FIVE YEAR PLAN

The primary goal to be attained within the next five years is to provide the investigators and forensic staff with the training and equipment necessary to perform the jobs required of them in an accurate and expeditious manner. It is another part of this goal to make certain that the laboratories are well-equipped and that the toxicology laboratory is cost efficient, recovering all, or at least the majority of its operating costs. Achievement of this goal is contingent on the following:

Upgrading and replacing equipment and instruments as required

Adding new instrumentation as justified by current state of the art and judicial needs

Continuing training of investigators and forensic staff

Continuing administrative and office improvements as required

Initiating direct on-line computer capability for laboratory and administrative facilities

Increasing the number of inquests and having them presided over by a law judge

Attempting to have one or more of the national Forensic meetings convene in San Francisco

Continuing law enforcement and medical education programs, with the potential of becoming an education center for forensic training

DEPARTMENTAL
ADMINISTRATION

DEPARTMENTAL ADMINISTRATION

MBO - PERFORMANCE MEASURES AND GOAL ACHIEVEMENTS DURING 1981-82

04A Objective measure - to increase efficiency by 50% over last year in transcription and preparation of legal records

At the beginning of fiscal year 1981-82, there was a 6-8 month backlog in the transcribing of autopsy reports. In the Fall of 1982, a Wang word processor with 2 terminals was installed in the office. Two transcribers received training in the operation of the unit. A standardized dictation protocol was developed for the autopsy surgeons and a corresponding program was written for the word processor. These changes facilitated entry of information from autopsies into a standard autopsy report format on the word processor and markedly increased efficiency of autopsy report transcription. By January, 1982, the backlog of autopsy reports dictated prior to institution of the standardized protocol had all been transcribed on a typewriter. All subsequent autopsy reports were being entered on the word processor. By the end of the fiscal year, transcription of autopsy reports was 2 months in arrears. Thus, a greater than 50% increase in efficiency was achieved during the fiscal year.

04B Objective measure - to increase out-of-county consultations by 25% over last year to provide revenue to the office

A total of 66 out-of-county consultations were performed during the fiscal year 1981-82 which provided revenue to the office. No annual target was set for this objective.

04C Objective measure - to increase training time of investigators by 15% over last year to provide better investigation and testing to assure realistic convictions of criminals

This goal was not reached during this fiscal year. In order for investigators to attend seminars or training sessions, they would be required to spend time away from the office. Currently, the number of investigators is not sufficient to provide coverage of absences of other investigators who are attending such training session.

DEPARTMENTAL

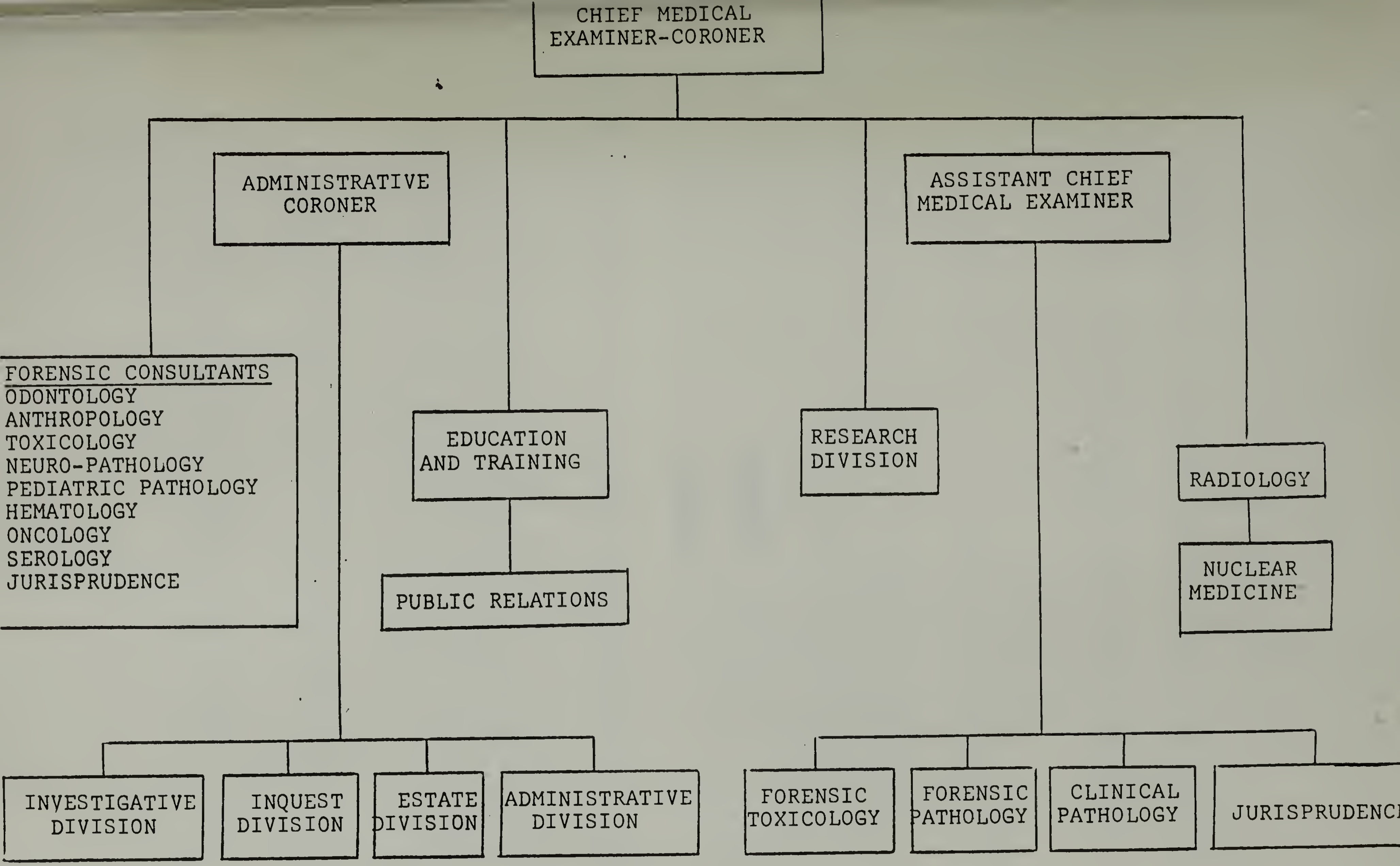
ADMINISTRATION

DEPARTMENTAL COSTS

1981 - 82

Total Budget	$1,076,717.00
Transfers to the Controller, Health and Retirement	159,722.00
NET BUDGET (all other costs)	916,995.00
Total cases	3,746.
Cost per cases investigated	$ 244.00
Revenues (sales of records, public auctions, fee-for-service work)	$ 37,129.00
Total Costs Ad Valorum Taxes Per Case Investigated	$ 234.00

As indicated elsewhere, this includes all investigative, administrative, scientific and expert witness costs to the county.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ADMINISTRATIVE CORONER
ASSISTANT CHIEF MEDICAL EXAMINER
FORENSIC CONSULTANTS
ODONTOLOGY
ANTHROPOLOGY
TOXICOLOGY
NEURO-PATHOLOGY
PEDIATRIC PATHOLOGY
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ADMINISTRATIVE DIVISION
FORENSIC TOXICOLOGY
FORENSIC PATHOLOGY
CLINICAL PATHOLOGY
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FORENSIC INQUIRY

MBO - Performance Measures and Goal Achievements During 1981-82

06A Objective measure - to increase by 25% over last year medical-legal examinations of out-of-county referrals to increase revenues to the office

During the fiscal year 1981-82, there were 9 medical-legal examinations referred from outside of the county to this office, as compared to 5 in 1980-81, an 80% increase.

06B Objective measure - to decrease turnaround time of toxicological testing by 30% over last year in order to decrease the waiting period for completion of death certificates and other legal documents

The performance measure for this objective was the average number of calendar days required for completion of toxicological testing on Coroner's cases. Between the 1st and 3rd quarters, there was a decrease from 13 to 9 days, 9 days being the annual target. During the 4th quarter, however, the average number of days required to complete toxicology testing increased to 12. This increase was due to the loss of personnel - the Senior Toxicologist retired and volunteer assistance was not available during this period. It is anticipated that there will be a decrease in average number of days during 1982-83 - 2 full-time positions have been added to provide technical assistance in the toxicology laboratory.

06C,06D Objective measures - to reduce the current backlog of serology testing by 100% and to increase priority testing of serology specimens by 75%

The performance measure for these objectives was the average number of days to complete serology testing on a case. The actual average number of calendar days required for completion of testing decreased from 25 to 18 days per case during the fiscal year. The decrease far exceeded the annual target of 44 days. The actual backlog of serology cases was reduced by 100%, all testing is now current and is performed by priority rating of the cases received.

06E Objective measure - to increase current workload by 15% over last year absorbing toxicological testing on more persons accused of major felonies

The performance measure for this objective was the number of felony cases tested per quarter. There were an average of 36 cases submitted for testing each quarter, exceeding the target of 32 per quarter.

FISCAL YEAR 1981-82

Total Deaths in County		8,038
Total Deaths Reported to Coroner		3,746
Cases Reported, Investigated and Cleared by the Coroner or physician's signature		1,911
Coroner's Cases		1,835
% Reported to Coroner	46.6	
% County Deaths Having Coroner's Autopsies	22.8	

Cases Accepted by Coroner

1. Natural Deaths	1,124	(61%)
2. Accidents	314	
3. Suicides	183	
4. Homicides	132	
5. Mode Equivocal	49	
6. Cause Unknown	18	
7. Sudden Infant Death Syndrome	15	

Autopsies performed	1,826
Autopsy Index	98.9%

Burials Authorized by Coroner

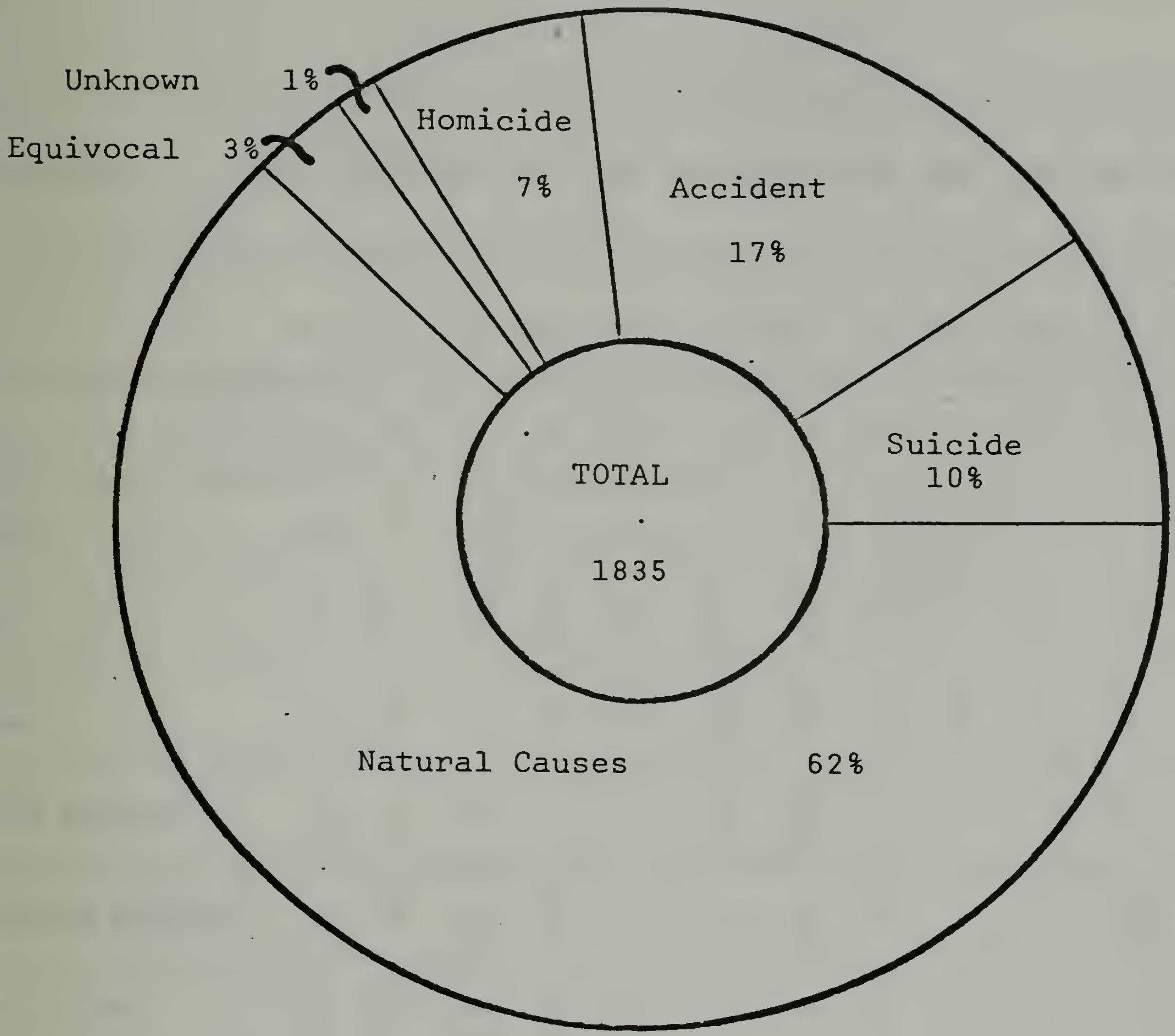
1. Indigents and fetuses buried by City	140
2. Veterans buried by funeral home (Rotation)	16
3. Cases buried by funeral home with Public Administrator-controlled funds	38

Inquests Held or Depositions Taken	49

Identification

1. Persons brought to Coroner's Office with insufficient identification	202
2. Persons subsequently identified by fingerprints, dental X-rays or other means	193
3. Persons buried as unidentified	9
4. Fingerprints taken and forwarded to FBI, CII, or SFPD	1,797

MEDICAL EXAMINER CASES FOR 1981-82



MEDICAL EXAMINER CASES

1981-82

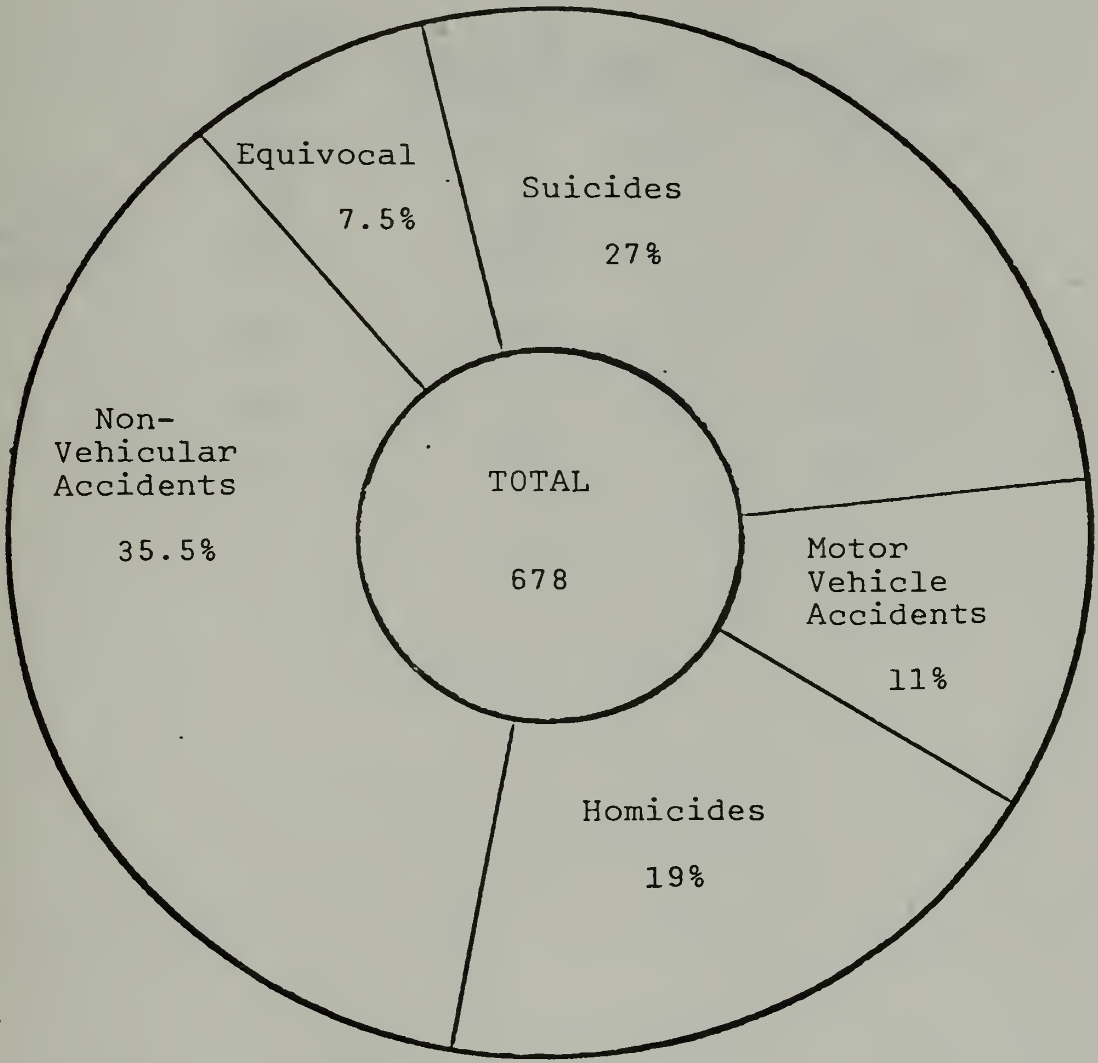
Monthly Comparison

ANNER OF DEATH	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
atural	75	85	95	95	85	99	117	82	113	83	100	95	1124
nknown	1	0	3	0	2	4	2	0	2	2	0	2	18
quivocal	2	7	5	2	2	4	5	4	5	4	5	4	49
uicides	18	17	13	16	15	17	18	16	16	10	13	14	183
omicides	12	19	9	6	14	4	20	5	10	11	12	10	132
ndustrial Accident	0	0	0	1	2	1	0	1	0	1	1	0	7
otor Vehicle Accident	4	10	4	7	5	4	6	4	3	5	10	12	7
ccident - Other	18	22	26	24	19	19	26	11	14	19	16	19	23
SIDS	2	3	1	0	1	1	1	0	3	2	0	0	1
OTALS	132	163	156	151	145	153	194	126	165	135	157	158	1,835

SIDS - Sudden Infant Death Syndrome

VIOLENT DEATHS

Violent deaths are those caused by any non-natural means, including drugs. In San Francisco, 678 violent deaths occurred during the fiscal year 1981-82, accounting for 37% of the Medical Examiner death investigations.



VIOLENT DEATHS

Of the 1,835 deaths investigated by the Coroner's Office during 1981-82, 678 were determined to be the result of violence.

Mode	Total No.	% of Coroner's Cases	% of County Deaths
ACCIDENT	314	17	3.9
Motor vehicle	74	4	
Non-vehicular	233	12.5	
Industrial	7	0.5	
SUICIDE	183	10	2.2
HOMICIDE	132	7	1.6
EQUIVOCAL	49	3	0.6

VIOLENT DEATHS

Racial Distribution

RACE	Accident	Suicide	Homicide	Mode equiv.	TOTAL
aucasian	241	155	83	41	520
lack	41	7	33	6	87
sian and Other	32	21	16	2	71
OTALS	314	183	132	49	678

Distribution by Sex

	Accident	Suicide	Homicide	Mode equiv.	TOTAL
ale	211	123	105	32	471
emale	103	60	27	17	207
OTALS	314	183	132	49	678

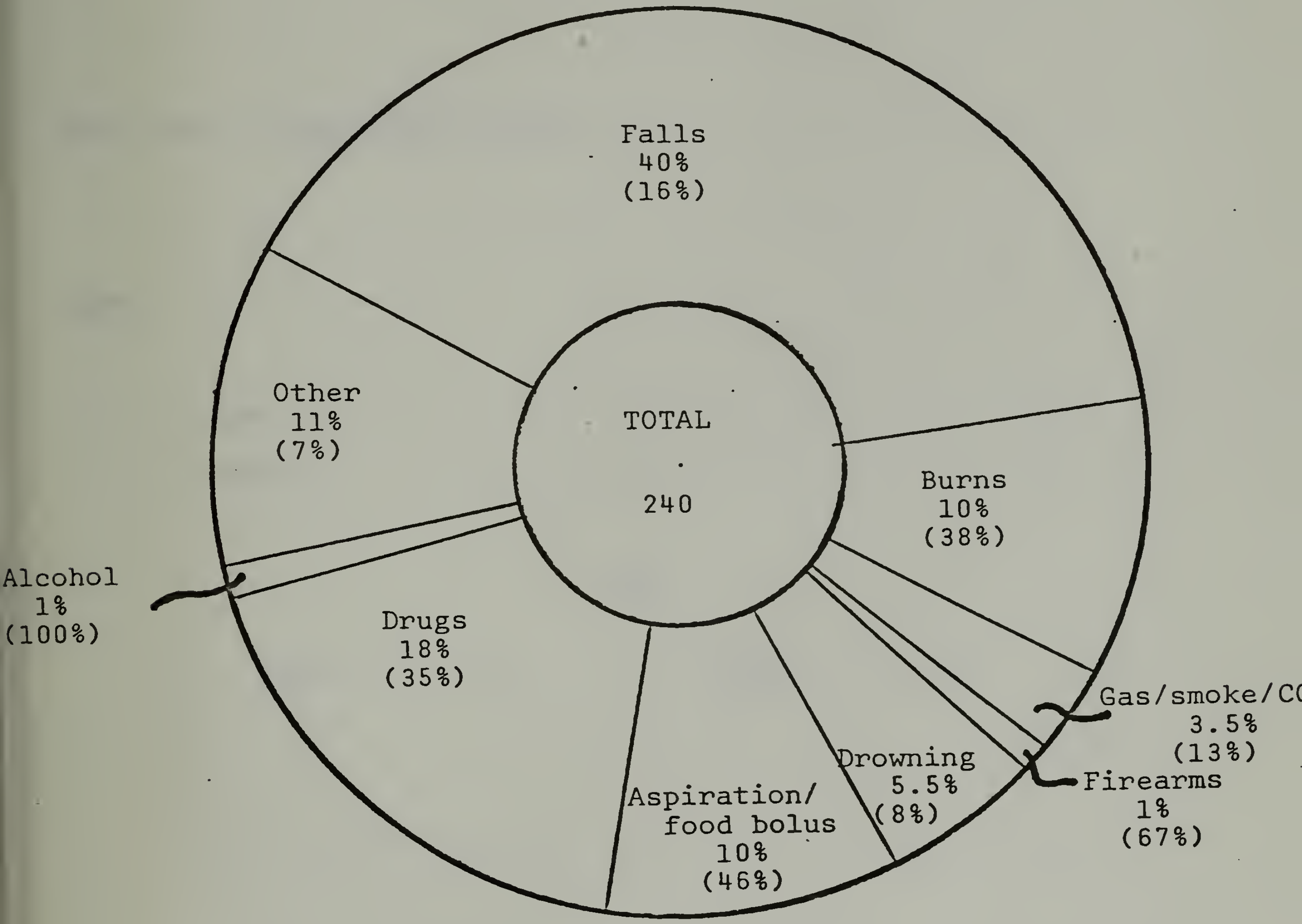
VIOLENT DEATHS

MODE OF DEATH - YEARLY COMPARISON

	1971-72	72-73	73-74	74-75	75-76	76-77	77-78	78-79	79-80	80-81	81-82
ACCIDENTS											
Motor vehicle	113	122	82	89	105	75	81	94	94	106	74
Non-vehicular	352	319	256	349	363	226	271	246	199	191	240
SUICIDES	206	227	220	224	195	233	194	233	208	179	183
HOMICIDES	110	94	137	126	151	149	145	103	114	136	132

NON-VEHICULAR ACCIDENTS

This category includes all unintentional fatalities except for traffic deaths. There were 240 accidental deaths which accounted for 13% of the Medical Examiner death investigations for the fiscal year of 1981-82.



The percent in brackets indicates the percentage of victims in the category with a positive blood ethyl alcohol concentration.

INDUSTRIAL ACCIDENTS

1981-1982

Total Number of Industrial Accidents	7

MEANS

Falls	6
Drowning	1

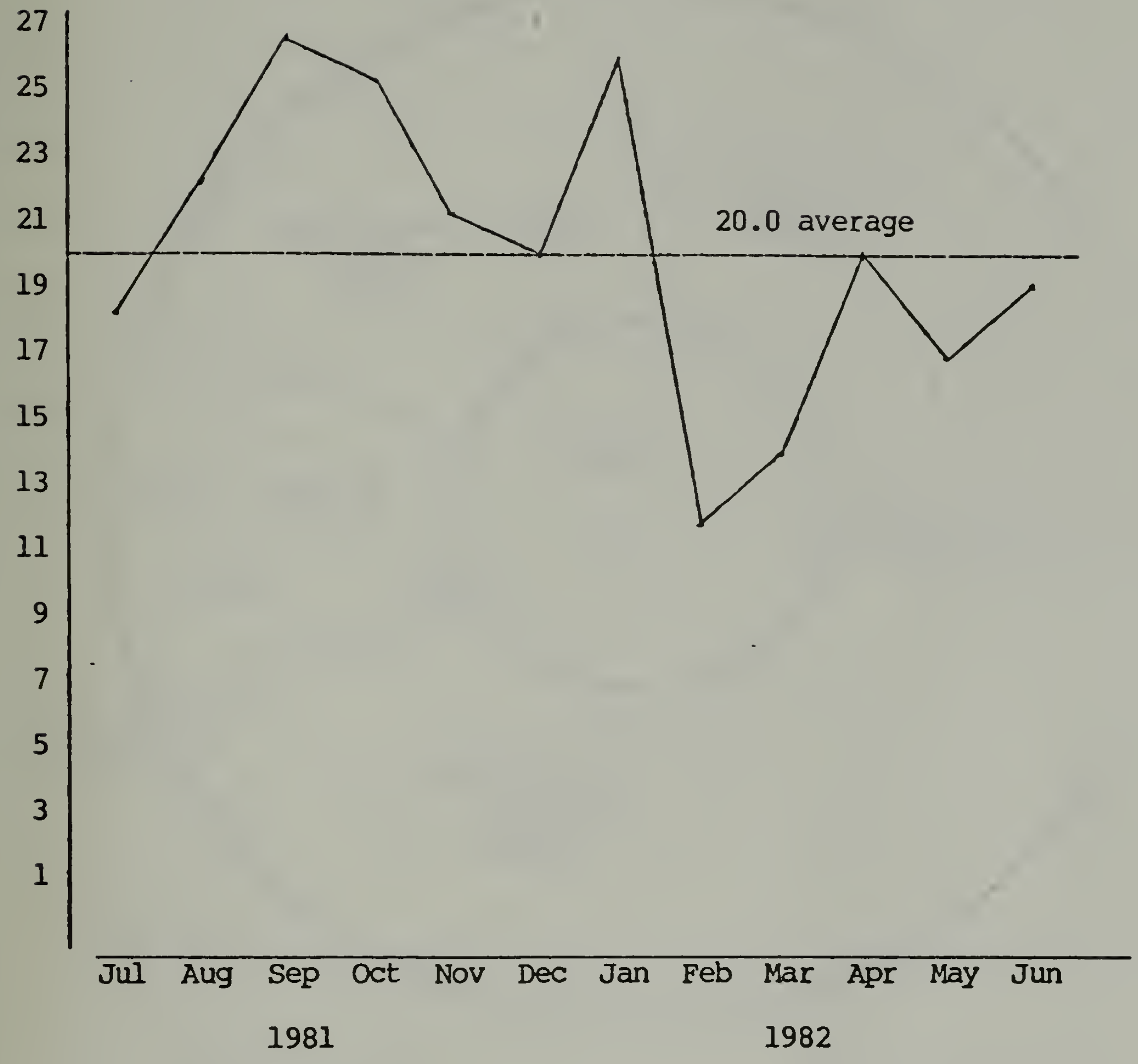
SEX

Male	7
Female	0

ACCIDENTS

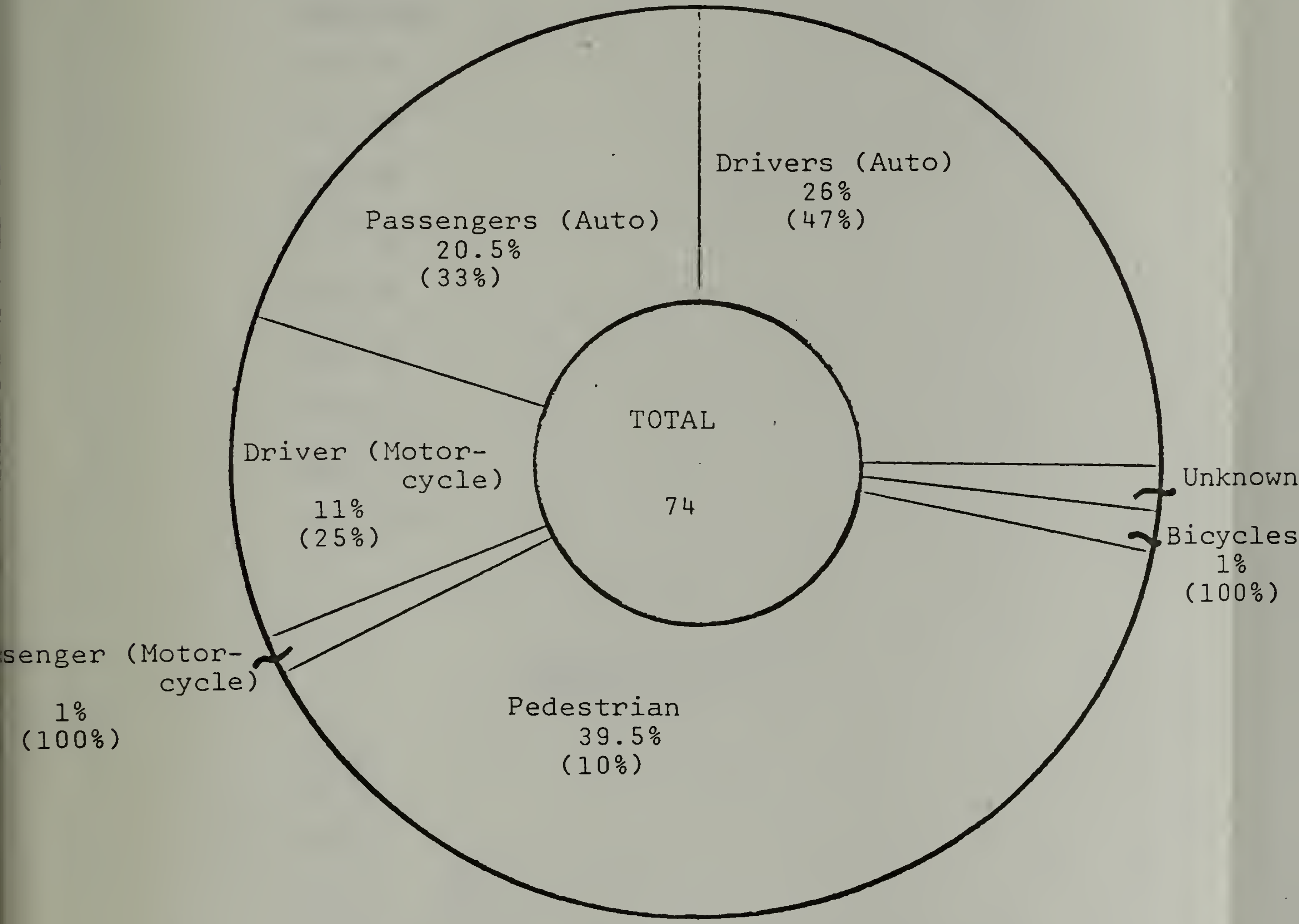
(Including Industrial)

Comparison by Month



TRAFFIC

In San Francisco, there were 74 traffic-related fatalities, accounting for 4% of the Medical Examiner death investigations for the fiscal year 1981-82.



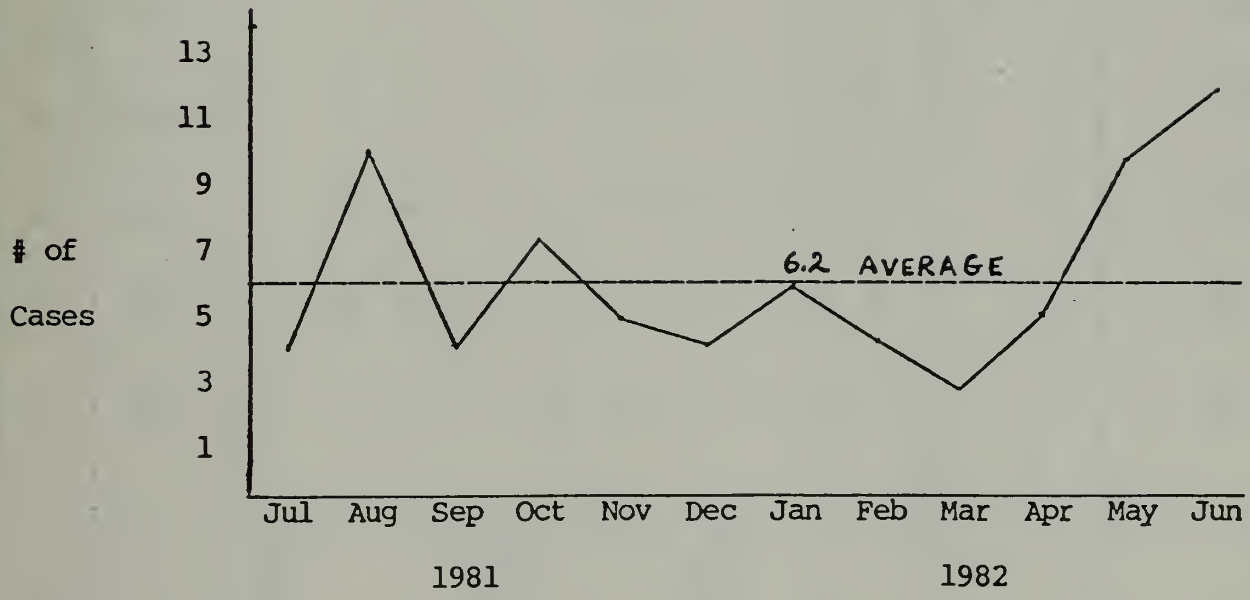
The figure in brackets indicates the percentage with positive blood ethyl alcohol.

TRAFFIC (VEHICULAR) DEATHS

Comparison by Age

Age Group	Number
0 - 20	15
21 - 30	17
31 - 40	6
41 - 50	6
51 - 60	12
61 - 70	3
71 - 80	6
81 - 90	7
91 - 100	1

Comparison by Month



ACCIDENTAL DEATHS

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
TOTAL/MONTH	18	22	26	25	21	20	26	12	14	20	17	19	240
Male	13	15	15	13	14	15	13	8	13	17	9	14	159
Female	5	7	11	12	7	5	13	4	1	3	8	5	81
MANNER OF DEATH													
Alcohol	0	0	1	0	0	0	0	0	0	0	0	0	1
Drugs	2	2	5	6	4	3	3	0	3	3	6	6	43
Aspiration/food bolus	1	1	2	3	0	1	6	2	1	1	3	3	24
Drowning	1	0	2	0	3	0	0	0	2	5	0	1	13
Firearms	0	1	0	0	0	0	0	0	1	0	0	1	3
Gas/Smoke/CO Inhalation	0	0	0	0	0	0	7	0	1	0	0	0	8
Burns	5	5	1	0	1	5	2	2	1	1	0	1	24
Fall	9	9	9	16	11	11	6	5	2	7	7	5	97
Other	0	4	6	0	3	0	2	3	3	3	1	2	27
MOTOR VEHICLE DEATHS													
	4	10	4	7	5	4	6	4	3	5	10	12	74
RACIAL COMPARISONS													
Caucasian	15	15	19	17	15	16	23	12	11	17	13	15	188
Black	1	3	7	3	4	4	3	0	2	1	3	2	33
Asian and Other	2	4	0	5	2	0	0	0	1	2	1	2	19

SUICIDE

The determination of suicide as a manner of death represents the summation of scene investigation, including a review of psychological state, autopsy, pathology, toxicology and, frequently, other investigation. To the best of our knowledge, this is the only Coroner's Office performing toxicology on multiple organs and/or body fluids routinely in order to evaluate the metabolic status of a drug or drugs.

Realizing the immense emotional impact on family, the diagnosis of suicide is never made lightly, and always represents a decision made on the basis of data sufficient to defend that decision in a court of law, if necessary. Should these data be inconclusive, the victim automatically gets the benefit of the doubt.

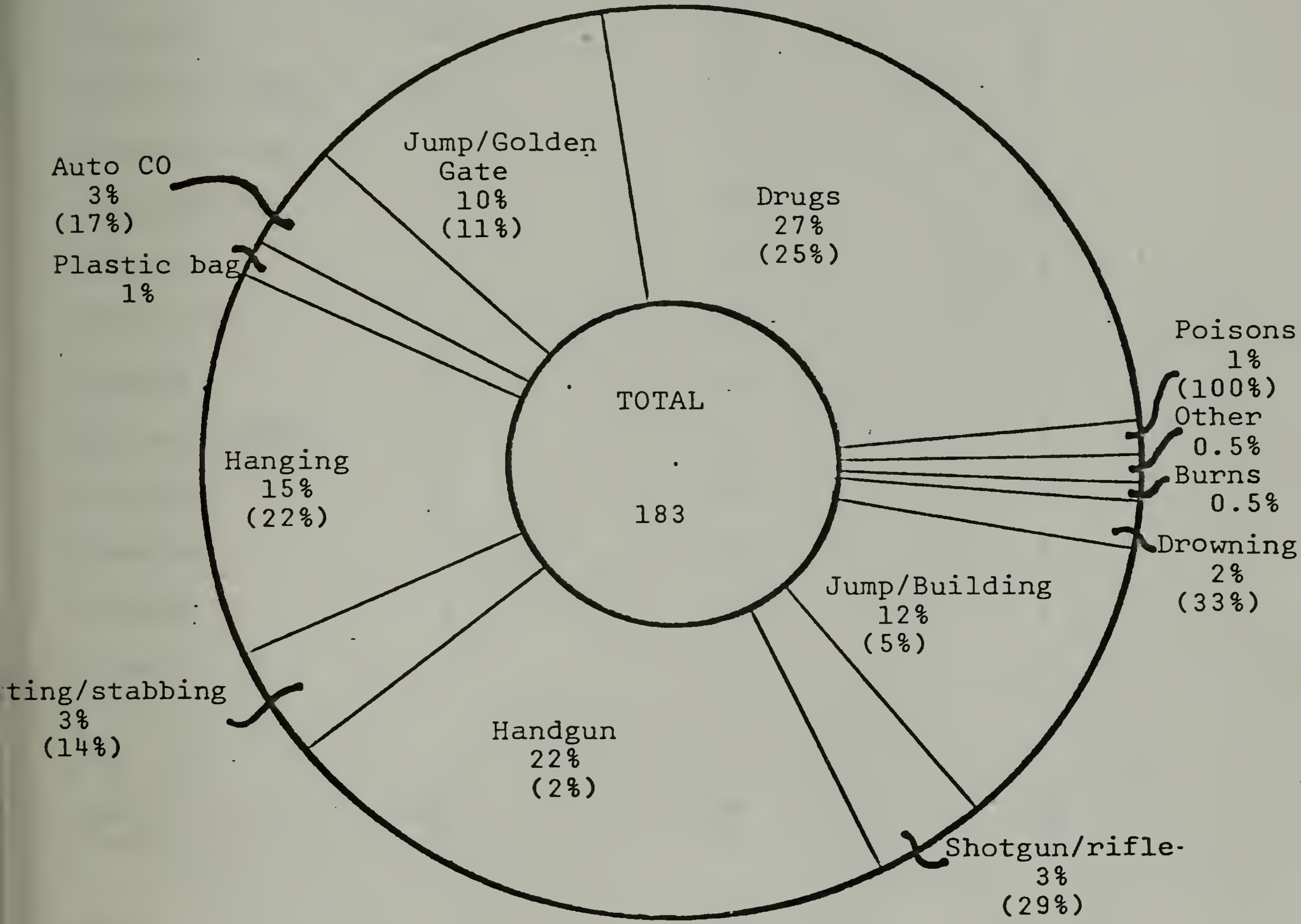
Suicide takes a tremendous toll of our young people. The relative number jumping from the Golden Gate bridge would not seem to warrant the publicity assigned them as compared to the evident need for help for individuals using other methods.

To help understand the problem, and, hopefully, to aid in reduction of suicides, this office has supported suicidology research and prevention programs for many years. It is hoped that this work will help to reduce this needless loss.

The majority of these deaths are situational reactions, and, given momentary trained support, are potentially preventable.

SUICIDES

Suicides are self-inflicted deaths. In San Francisco, 183 suicides occurred, accounting for 10% of the Medical Examiner death investigations for the fiscal year of 1981-82.



The percent in brackets indicates the percentage of victims in the category with a positive blood ethyl alcohol concentration.

SUICIDES

TOTAL NUMBER 1981-82 183

METHOD	1979-80	1980-81	1981-82
Poisoning	52	55	50
Jump/G.G. Bridge	21	21	18
Jump/Bay Bridge	1	0	1
Jump/Building	30	13	20
Auto/CO	3	7	4
Plastic bag	1	0	2
Hanging	35	23	27
Cutting/stabbing	5	8	8
Firearms	47	36	48
Drowning	10	6	2
Burning	0	3	1
Other	2	7	2
SEX			
Male	162	128	123
Female	46	51	60
RACE			
Caucasian	174	142	155
Black	17	12	7
Asian and Other	17	25	21

SUICIDES

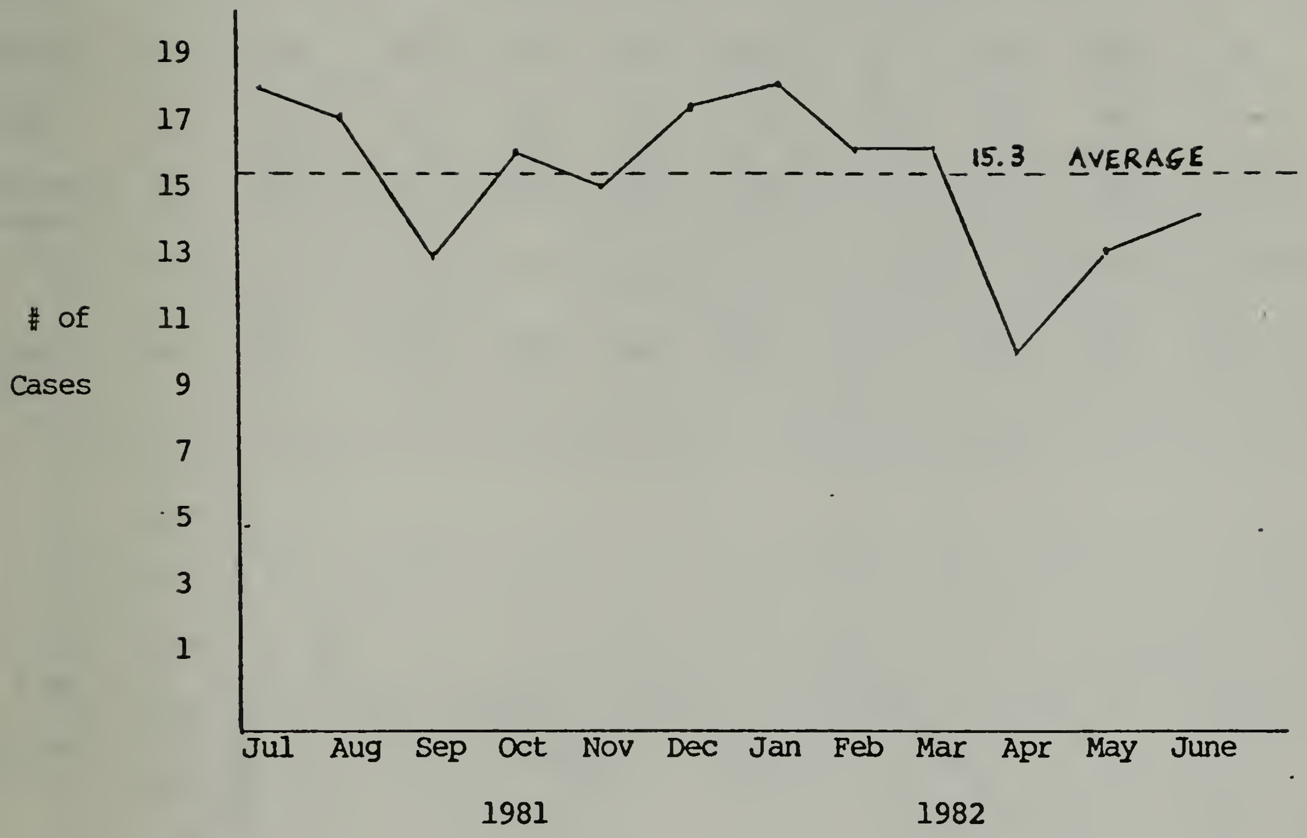
Comparison by Age

Number per Year

Age Range	1978-79	1979-80	1980-81	1981-82
0 - 20	6	9	11	7
21 - 30	65	60	41	56
31 - 40	36	41	41	48
41 - 50	34	39	32	26
51 - 60	36	19	22	13
61 - 70	25	17	13	17
71 - 80	18	21	11	12
81 - 90	11	11	7	3
91 - 100	2	0	1	1

SUICIDES

Comparison by Month



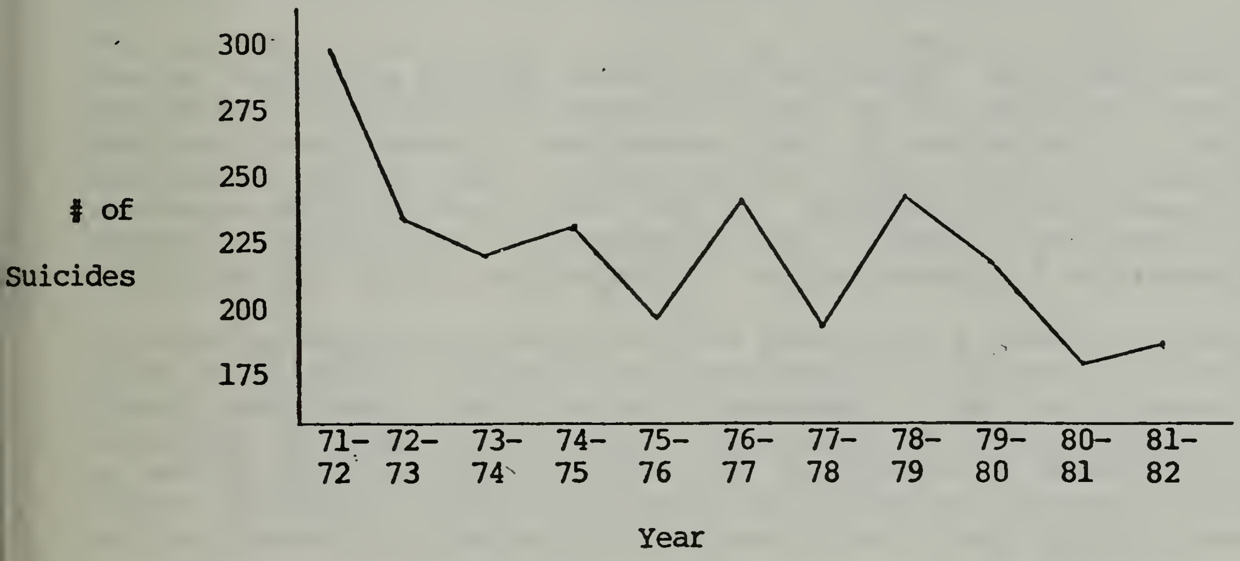
SUICIDES

COMPARISON BY YEARS

2,700

1800

ETHOD	71-72	72-73	73-74	74-75	75-76	76-77	77-78	78-79	79-80	80-81	81-82
oisoning	74	69	51	76	56	79	65	83	52	55	50
and gun	38	33	43	45	44	49	35	40	40	31	36
olden Gate Bridge	28	16	21	14	19	28	18	19	21	21	18
otal Suicides y Year	296	227	220	224	195	233	194	233	208	179	183



HOMICIDE

Homicide is the killing of one human by another. Murder is the unlawful killing of a human being with malice. The following data do not differentiate homicide as to whether it is justifiable, accidental or murder. Such distinctions are the proper function of the judicial system and are not the responsibility or function of this office.

Any judicial system dealing with crimes involving death requires a well-trained staff and well-equipped Medical Examiner-Coroner's Office that can and will interpret the forensic findings in an unbiased, fair manner. This investigation must be intense, accurate and rapid enough so that the charges against one or more individuals may be pursued or dismissed without unfairly affecting their constitutional rights. This is the purpose of this office.

The proper evaluation and investigation of a homicide begins, naturally, at the scene. In the majority of cases, a member of this office (either the Coroner's investigator, Administrative Coroner, or Medical Examiner), determines whether a death is a potential homicide. It has been well-documented that, if such a determination is made by an individual inexperienced or untrained in death investigation, his opinion will be wrong in 50% of the cases. Such a person is very apt to miss the subtle homicide and is more inclined to miscall a natural or accidental death as homicide, resulting in false arrest, false accusations, needless expenditure of public funds, waste of investigative time and delay in the investigation of other deaths.

The Coroner's Investigator responds to the scene of death and determines whether the Police Homicide Detail will be called. When homicide is obvious, the Coroner's Investigator responds as part of a team (other members include homicide investigators, photographers and criminologists). This office is responsible for the body, identification, inquiry into circumstances, manner and means of death (Gov. Code 27491.2). Beside the scene investigation, the Coroner's Investigator is responsible for recovering property, locating and notifying next of kin, and preparing a written summary of his investigation.

In about one-third to one-half of the homicides, a forensic pathologist responds to the scene, aiding in the investigation. The subsequent autopsy, including photography, may also use fluoroscopy, X-ray, angiography and other techniques to establish and define the number, nature and severity of wounds, to obtain evidence (i.e. bullets) and to prepare an official report. This report, including chemistry, serology and toxicology results, is used as part of the prosecution or defense of the case in the formal judicial hearing.

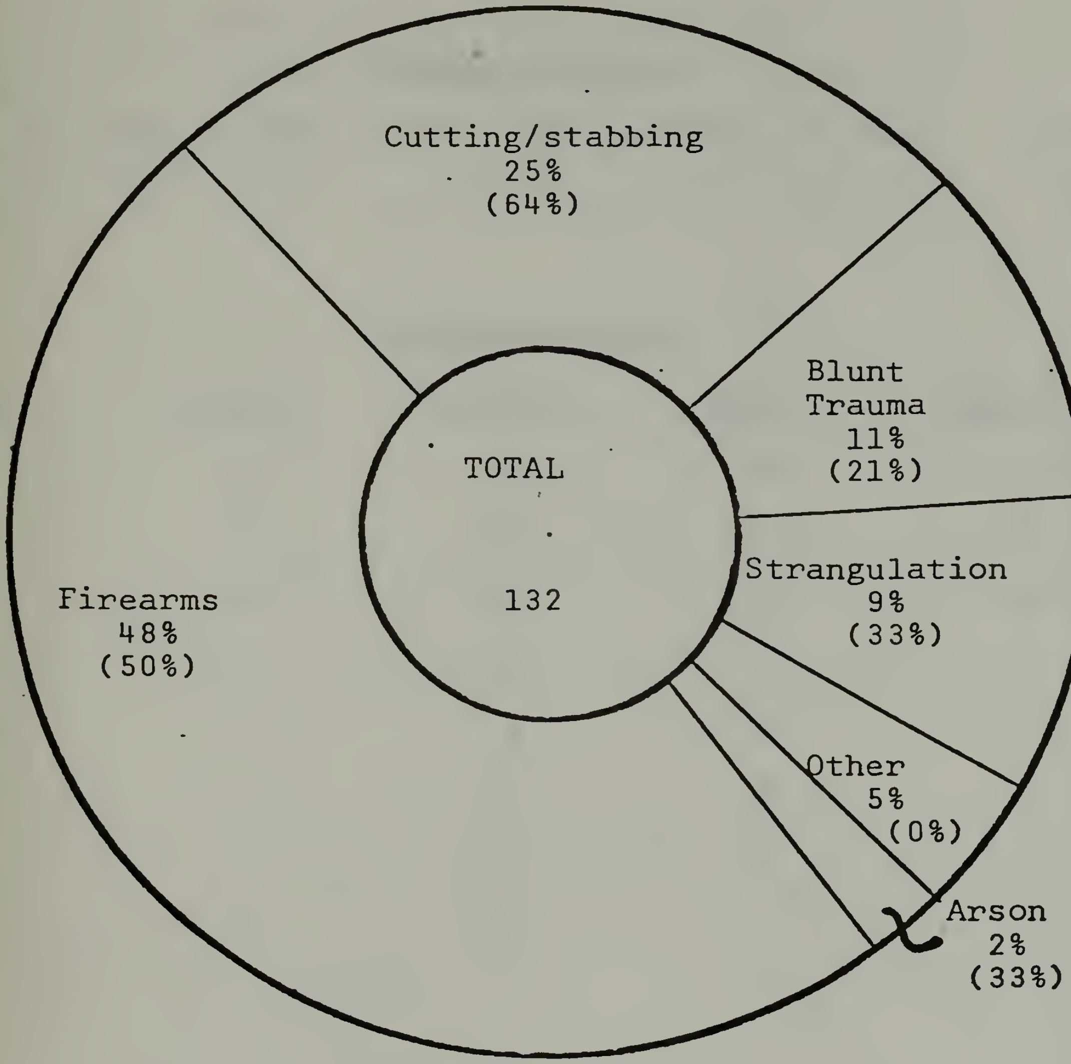
Pertaining to criminal trial, our judicial system requires identification of an individual and presentation of evidence, usually by virtue of expert testimony, relative to the cause of death or trauma associated with death. The Medical Examiner-Coroner's Office identifies the body, frequently relying on local police, CII or FBI fingerprints. Expert forensic testimony is given by the Forensic Pathologist from this office. In addition, the Forensic Toxicologist is frequently called upon to testify on the significance and effect of

various drug levels, a matter of great importance when dealing with the concept of diminished capacity.

Of minor, but increasing importance, is the fact that, because of our excellent and advanced medical facilities, we are seeing more homicide and trauma cases transferred into the County for medical therapy. Should these individuals die, the autopsy and court testimony are done by this office.

HOMICIDES

Homicides are those deaths caused by another person, generally resulting in murder and manslaughter charges. In San Francisco, 132 homicides occurred in 1981-82, accounting for 7% of the total Medical Examiner investigations.



The percent in brackets indicates the percentage of victims in the category with a positive blood ethyl alcohol concentration.

HOMICIDES

Total Number of Homicides 132

Males . . . . 105 Females 27

COMPARISON BY MONTH

JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
12	19	9	6	14	4	20	5	10	11	12	10	132

COMPARISON BY AGE

Age range	1978-79	1979-80	1980-81	1981-82
0 - 20	10	9	14	16
21 - 30	38	43	41	33
31 - 40	19	28	29	36
41 - 50	16	11	14	18
51 - 60	9	9	14	16
61 - 70	5	9	9	6
71 - 8	6	5	4	2
81 - 90	–	–	–	5

COMPARISON BY RACE

Caucasian.	83
Black.	33
Asian and Other. .	16

HOMICIDE

COMPARISON BY METHOD

Method	Number	Alcohol*	Drugs**
Blunt trauma	14	21%	14%
Cutting/stabbing	33	64%	12%
Firearms	64	50%	3%
Strangulation	12	33%	0%
Arson	3	33%	0%
Other	6	0%	17%

* Refers to percentage of victims (of those tested) with positive blood ethyl alcohol concentrations

** Refers to percentage of victims (of those tested) with positive blood drug levels

PATHOLOGY

In the Pathology department, the tissue and body fluid samples taken at autopsy are prepared for microscopic study, histochemically stained, or analyzed for chemical constituents. Cardiac pacemakers or other mechanical life-support devices are examined for any defect. Smears or "wet-mounts" are examined for spermatozoa, bacteria, or tuberculosis. Bacteriologic cultures may be taken, but, if pathogens are grown, they are usually sent to the Department of Public Health (state or local) for further identification. If indicated, "soft" X-rays or histochemical tests are done to establish entrance or exit gunshot wounds. Here, also, research techniques such as methods of obtaining fingerprints from the skin of a victim, are developed.

MONTHLY FIGURES

PATHOLOGY*

YEAR	TOTAL CORONER'S CASES	CASES REFERRED TO PATHOLOGIST	NO. OF ORGANS SUBMITTED	NO. OF SECTIONS TAKEN	HISTO-PATHLOGIC SLIDES MADE	SPECIAL STAINS**	BLOOD GROUP-INGS***	OTHER DETERMINA-TIONS****
1981								
JULY	133	86	772	1622	435	25	14	106
AUGUST	163	116	895	2091	482	35	22	110
SEPTEMBER	155	119	1022	1994	507	22	15	129
OCTOBER	151	107	878	2096	499	22	5	138
NOVEMBER	145	113	780	1827	393	32	11	93
DECEMBER	153	105	760	1760	488	15	10	133
1982								
JANUARY	193	117	801	1676	365	20	14	112
FEBRUARY	126	88	620	1539	323	4	10	98
MARCH	165	105	806	1615	380	5	15	119
APRIL	136	89	659	1689	372	35	20	142
MAY	157	95	715	1806	379	43	15	126
JUNE	158	91	717	1813	352	13	11	163
TOTALS		1231	10231	21528	5298	271	162	1469

*These figures do not reflect photography, forensic radiology or material prepared for teaching forensic pathology

**Includes smears examined for bacteria and spermatozoa

***ABO and Anti Rh

****Blood, urine, water, evidence - for hematology, biochemistry, urinalysis, bacteriology, serology, "Sickledex", etc.

PATHOLOGISTS

Time spent by 4 pathologists during the 1981-82 fiscal year in:

Court appearances

Depositions

Attorney consultations

Lectures

= 3848 hours

TOXICOLOGY

Toxicology is the science that deals with the detection and identification of drugs and poisons. In our work, any possible agent may be of importance in a death. The most common poisons in our community are prescription items. Other common agents are illegal drugs (street drugs), industrial compounds, certain gases and alcohol.

It is necessary not only to accurately detect and identify the agent or agents involved in a case, but to quantitate them precisely so that their exact relationship to the death, if any, can be evaluated. This determination must be as precise and specific as scientifically possible, and it must be able to stand up to review by any other qualified laboratory in the nation.

As a routine part of our work, we determine the levels of drugs in two or more body "compartments" such as blood and stomach contents, or combinations of three compartments, in order to answer the question of acute or chronic drug usage. This is of utmost importance in determining the time of ingestion, and therefore the intent of the ingestion - whether accidental or suicidal. Since the types and natures of the unidentified compounds can be so varied, the capabilities of this department must also be varied.

Extensive research is performed in this department, some of which deals with means of identifying unknown compounds in post-mortem samples. A current project is concerned with determining the types of drutgs and their levels in both the victim and suspect in certain serious crimes. This information is then available to the courts to aid in the just determination of the innocence or guilt of the person charged with the crime.

TOXICOLOGY

July 1981 - June 1982

Incidence of various drugs or poisons found singly or in combination:

The drugs listed are not necessarily the cause of death or even a contributing cause. These figures reflect toxic agents present in the body to any degree. Any one case may have more than one drug or poison present. Also, the drugs/poisons listed may fit into more than one category and have been placed in a specific class on the basis of their most common usage.

ABUSE DRUGS

Alkaloids of morphine	25
Amphetamine	8
Cocaine	12
Codeine	22
Methamphetamine	8
Methaqualone(Quaalude)	2
Methylenedioxyamphetamine	1
Phencyclidine (PCP)	1

ANALGESICS

Non-Narcotic

Acetaminophen	11
Salicylate	19
Phenacetin	1

Narcotic

Meperidine (Demerol)	2
Methadone	15
Propoxyphene (Darvon)	10
Pentazocine (Talwin)	2

ANTI-ARRHYTHMICS, CARDIAC

Lidocaine	13
Propranolol (Inderal)	2
Quinidine	1

ANTI-CONVULSANTS

Phenytoin	6

ANTI-DEPRESSANTS

Tricyclic Type

Desipramine (Norpramine)	3
Doxepin (Sinequan)	1
Imipramine (Tofranil)	1
Nortriptyline (Aventyl)	9

Non-Tricyclic type

Amitriptyline (Elavil)	14
Lithium	2

ANTIHISTAMINES

Diphenhydramine	3
Pyrilamine	2

HYPOGLYCEMIC AGENTS

Insulin	1

MISCELLANEOUS

Caffeine	1
Carisoprodel (Soma)	1
Cyanide	2
Digoxin	1
Moprotilene	1
Nitrite	1
THC	1
Theophylline	2
2,4 D	1

SEDATIVE-HYPNOTIC DRUGS

Barbiturates

Amobarbital	2
Pentobarbital	6
Phenobarbital	9
Secobarbital	8

Non-barbiturates

Chloral hydrate	8
Ethchlorvynol (Placidyl)	2
Flurazepam (Dalmane)	12
Glutethimide (Doriden)	1

TRANQUILIZERS, MINOR
(Used to treat anxiety)

Benzodiazepines

Chlordiazepoxide (Librium)	4
Diazepam (Valium)	9

TRANQUILIZERS, MAJOR
(Used to treat psychosis)

Phenothiazine derivatives

Chlorpromazine (Thorazine)	3
Thioridazine (Mellaril)	4
Trifluoperazine (Stelazine)	1
Fluphenazine (Prolixin)	1

Non-phenothiazines

Haloperidol (Haldol)	1

VOLATILE AGENTS AND GASES

Acetone	3
Carbon monoxide	18
Freon-12	1
Isopropyl alcohol	1
Methane	1

TOXICOLOGY

Year/ Month	# Cases Referred to Toxicology	# Specimens Received	# Tests Performed	Alcohol Tested	Alcohol Pos.	Barbiturates Tested	Barbiturates Pos.
1981							
JUL	136	662	521	136	27	136	3
AUG	154	792	720	152	48	152	5
SEP	163	777	555	158	31	158	1
OCT	135	413	392	130	31	35	1
NOV	162	804	498	160	46	2	2
DEC	156	749	336	154	32	1	1
1982							
JAN	179	862	526	177	45	3	3
FEB	121	558	323	121	27	3	3
MAR	179	857	534	175	33	2	2
APR	130	654	357	127	22	0	0
MAY	153	750	441	149	31	1	1
JUN	163	783	456	159	38	1	1
TOTALS	1831	8661	5659	1798	411	494	23

HEROIN DEATHS

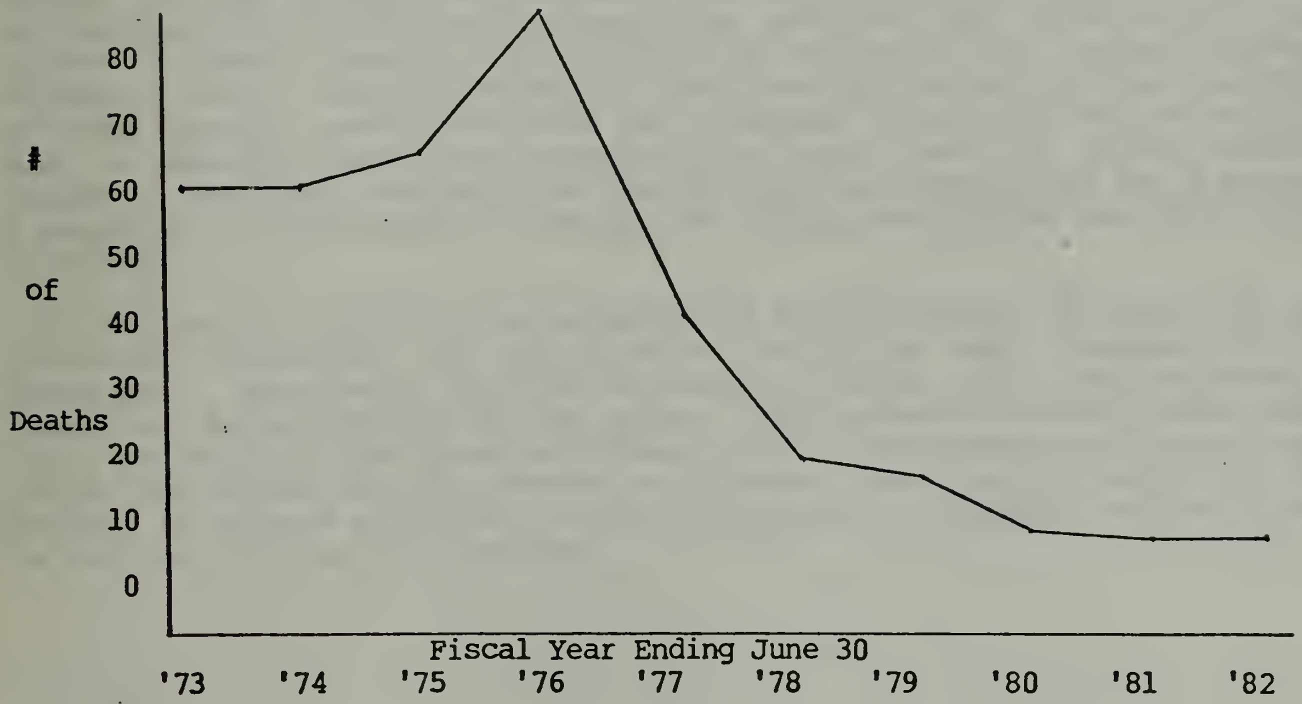
Morphine-type alkaloid (Heroin) deaths. 9

Sex Distribution	Male	7	(78%)
	Female	2	(12%)
Racial Distribution	Caucasian	6	(67%)
	Black	3	(33%)

Age Distribution

16-20	21-35	26-30	31-35	36-40	41-over
0	2	0	1	2	4

TEN YEAR COMPARISON OF HEROIN DEATHS



The data presented on the graph indicate no increase in the heroin-related deaths in San Francisco for the sixth consecutive year.

RESEARCH AND SPECIAL PROJECTS

The San Francisco Medical Examiner-Coroner's Office was awarded a federal contract in September 1978, from the National Institutes of Child Health and Human Development, to set up and maintain a coordinating pathology laboratory as part of a nation-wide collaborative study on Sudden Infant Death Syndrome (SIDS). The aim of this study is to determine specific diagnostic criteria and possibly to establish risk factors for SIDS. This contract is funded currently at a level of $372,609. and will continue to December, 1982. Tissue specimens, death investigative reports, and autopsy reports from 978 cases of infant death were submitted to this office from Coroner's offices throughout the United States. From the tissues submitted on each case, a set of microscope slides was prepared in a standardized manner. A total of 23,729 microscope slides were prepared. The slide sets were examined by three pathologists, experienced in SIDS diagnosis, who each submitted an independent opinion as to the cause of death on each case. A "second review" is now in progress in which the three pathologists are re-reviewing their microscopic findings on each case in conjunction with the autopsy and death investigative reports. The final cause of death will be established by this "second review". Data are being collected and coded for computer input at the Data Coordinating Center at the University of Washington in Seattle. The research coordinator, Dr. Donna Allison, attended the American Pediatric Society meeting in Washington, D.C. in May, 1982 at which preliminary data from this study were presented. She will also attend and present a paper at the American Public Health Association meeting in November, 1982 in Montreal, Canada. This contract has provided employment for 11 people since its inception. Two people are now working part-time on this project.

This office was also the recipient of a federal grant, funded with LEAA monies, received through the Office of Criminal Justice Planning in Sacramento and the Mayor's Criminal Justice Council in San Francisco. This project, entitled "Forensic Serology and Toxicology Analysis" was funded through September, 1980. Starting October 1, 1980, funding for this project has been provided from the General Fund with the understanding that all efforts will be made to generate revenue to compensate for these funds by fee-for-service testing of specimens received from outside counties. Employment for 3 people, 2 part-time, 1 full-time, was provided on this project during the fiscal year of 1981-82.

A special project (11550) is being performed by this office, in particular the Toxicology department, in collaboration with the San Francisco Police Department. Individuals who are suspected of being under the influence of opiates are being detained by the police. With informed consent, urine specimens are obtained from these individuals. The urine samples are then screened in this office for the presence of opiates. Test results concerning the presence or absence of opiates in urine at the time of specimen collection may be admitted into court proceedings.

GLOSSARY

ALKALOID OF MORPHINE GROUP	Typically referred to as morphine-type alkaloid, this is the chemical substance found in body fluids after the injection of heroin or other drugs derived from opium
TOXICOLOGY NOT VALID OR ELIMINATED	This term indicates that the deceased lived long enough after the injury to have eliminated some or all toxic agents from the body
FORENSIC PATHOLOGY	The specialty field of medicine involving the application of medical and pathology principles in determining the cause and manner of sudden, unexpected, and medically unattended deaths. This includes the type and nature of injury, public health hazards, type or nature of homicide weapon, the relation of injury to death and interpreting other factors for the court. These data are prepared and presented to the judicial system or public health interests in keeping with the best available knowledge
MODE OF DEATH	Indicates the manner of death, such as natural, accident, suicide or homicide, and is to be distinguished from cause of death, which is purely a medical determination
MODE EQUIVOCAL	With the cause of death undetermined, investigative data do not clearly differentiate between two modes of death, although some evidence supports either one
MODE UNDETERMINED	With the cause of death determined, investigative data do not clearly support one of two possible modes and either one is possible without prejudice
MODE UNKNOWN	Circumstances insufficient to indicate between two possible modes, as when only bones are found, or when no medical cause of death is determined
PATHOLOGY	That branch of medicine which deals with the essential nature of disease, especially in the structural or functional changes in tissues, organs or systems of the body causing disease. It involves the diagnosis of disease by microscopic or chemical analysis
SEROLOGY	That branch of pathology which deals with the analysis of blood and body fluids. Blood types for identification, exclusion of a suspect or judicial purposes are examples of the use in this office
TOXICOLOGY	The scientific study of poisons, their detection, actions and treatment. The relationship of drug levels to emotional or personality change, behavioral or reasoning ability are frequent decisions based on this data

MEDICAL EXAMINER	A physician specifically trained in forensic pathology who is responsible for investigating and determining the cause and manner of sudden or unexpected death
AUTOPSY	A scientific dissection of the human body to determine the cause and nature of death in order to detect public health hazards, determine the method or type of death in homicides and improve the level of medical care in the community. In some cases, showing that no injury or wrongdoing was present is of great emotional and stabilizing value to the family

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CHIEF MEDICAL EXAMINER – CORONER SAN FRANCISCO, CALIFORNIA

ANNUAL REPORT

July 1, 1982 - June 30, 1983

BOYD G. STEPHENS, M.D.
Chief Medical Examiner-Coroner
Hall of Justice-850 Bryant Street
San Francisco, Calif. 94103

CHIEF MEDICAL EXAMINER - CORONER

San Francisco, California

ANNUAL REPORT

July 1, 1982 - June 30, 1983

BOYD G. STEPHENS, M.D.
Chief Medical Examiner-Coroner
7th and Bryant Streets
San Francisco, California 94103

ty and County of San Francisco
Chief Medical Examiner · Coroner

September 1983

Honorable Dianne Feinstein, Mayor
Members of the Board of Supervisors
City and County of San Francisco

Dear Mayor Feinstein and Honorable Supervisors:

The past year has continued to illustrate the importance of a good, but unbiased forensic medicine program not only in the commonly assumed association with victims of sudden or unexpected death, but also in many aspects of the medico-legal care of the living. The vast potential of a forensic center to the citizens and county is gradually being realized. It is our continued posture to represent a non-biased, but scientific medico-legal investigation of those deaths within our jurisdiction by California law, as well as the evidence we collect and analyze from the living.

The past year saw many cases where this office as such or as part of a investigational team helped solve or gather evidence, and interpret those findings in a court of law. We have continued to upgrade the training of the investigators and scientists who staff the department. We are slowly increasing the equipment and instruments necessary for the scientific work we must do.

This annual reports shows only the data resulting from work units, tests or cases investigated. It does little to reflect the extent of the work and care that went into these investigations, or the impact of the results on individuals and families. Much of this is detailed in the "Introduction" and "Statement of Current Management and Scientific Position", as shown in the 1981-1982 annual report.

A major effort to be added to this upcoming years program is to try to improve the public image of the medical examiner, largely through an attempt to get the media to both give credit to the department where justified, and to do so by the name "Medical Examiner,"as well as to accentuate the fact that we are physicians, and board certified in the speciality field of forensic pathology. In the past, the media had declined to generally give this credit, which further supports a common mis-belief that we only "pick up dead bodies" and do nothing else. By an coordinated effort, we would plan to gather additional support for the team investigation concept and accentuate the importance of the initial investigation of the scene of death.

Sincerely,

Boyd G. Stephens, M.D.
Chief Medical Examiner/ Coroner

553-1694 Hall of Justice, 850 Bryant Street San Francisco, CA 94103
ACCREDITED NATIONAL ASSOCIATION OF MEDICAL EXAMINERS

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INTRODUCTION

The Medical Examiner-Coroner is appointed by law to many responsibilities, the foremost of which is the investigation and certification of a variety of deaths including all deaths of other than natural causation, and any apparently natural deaths in which no physician can reasonably state the cause. The Medical Examiner can utilize any and all medico-legal investigative techniques, including autopsy, to establish both the medical cause of death, and mode or circumstances of death (natural, accident, homicide, suicide or undetermined).

The deaths which must be reported to the Medical Examiner-Coroner, as required by various sections of the Government, Health and Safety and Penal codes are as follows:

1. Homicide - known or suspected
2. Suicide - known or suspected
3. Following accident or injury (whether the accident or injury is the primary cause or contributory; death occurring immediately or at some remote time)
4. Medical attendance of less than 24 hours
5. No physician in attendance
6. Physician unable to state the cause of death (must be unable, not merely unwilling)
7. Poisoning (food, chemical, drug, therapeutic agents)
8. Occupational or industrial deaths
9. All deaths where a patient has not fully recovered from an anesthetic, whether in surgery, recovery room, or elsewhere
10. All deaths in operating rooms
11. All solitary deaths (unattended by physicians or other person in the period immediately preceding death)
12. All deaths in which the patient is comatose throughout the period of the physician's attendance
13. All deaths of unidentified persons
14. Grounds to suspect that the death occurred in any degree from a criminal act
15. Contagious disease - known or suspected - and constituting a public health hazard
16. Deaths in prison or while under sentence
17. In the continued absence of a physician (not having seen the patient in 20 days prior to death)
18. Associated with a rape - known or alleged - or crime against nature
19. Related to or following abortion - known or suspected
20. Involving drowning, fire, hanging, gunshot, stabbing, cutting, starvation, exposure, alcoholism, drug addiction, strangulation or aspiration

Additional mandated responsibilities include protection and safekeeping of property belonging to deceased individuals; conducting inquests when indicated; maintaining proper public records; making reports to other agencies; identification of deceased persons; internment of indigent dead; and many other death-related activities.

Statement of Current Management and Scientific Position

It is apparent that the physical facilities of the San Francisco Medical Examiner-Coroner's Office, unlike those in so many other communities, are well-designed and adequate for performing the work and accomodating the workload for this population. However, there is a shortage of personnel in both scientific and administrative positions. Some of this shortage can be resolved by a reduction in redundant and unnecessary work. Also, a major difference can be made by microfilming records, as well as by shifting from our current office procedures to more modern techniques such as CRT and computer units. Much administrative time in this office is spent typing and preparing repetitive forms and preparing and maintaining repetitive records. Computer assistance would facilitate the preparation of many reports. The office is understaffed to the point that most reports are delayed and mistakes are increased. Rather than management duties, the management staff is required to perform typing and filing duties to get the work load done; the professional staff has to perform many administrative duties, taking time away from the medical or forensic work they are trained and paid to do.

I. ADMINISTRATIVE

Currently, the office is short two, and potentially three positions, depending upon the impact on this office of Proposition 8 and the consequent increase in consultations and retrials. There is need for an executive secretary. The Chief Medical Examiner currently types his own letters, reports and correspondence taking time from his administrative and forensic responsibilities. There is a need for a junior management assistant to handle payroll, inventory and purchasing and to interface with departmental administrative needs. This position is needed because the work load of the management assistant is tremendous, frequently requiring overtime and weekend time. An additional medical transcriber is needed due to the anticipated increased demand for the rapid preparation and production of forensic reports for court necessitated by Proposition 8.

II. INVESTIGATIVE

Scene investigations are currently performed by 10 deputy coroners on a 24-hour, 7 day basis. Deputy coroners are peace officers. Typically, they receive 4,000 cases for investigation per year, representing approximately 50% of the annual deaths in the community.

The deputy coroner conducts an investigation with the purpose of determining, first of all, whether the death is within the jurisdiction of the office in accordance with Section 27491 of the California Government Code. If the case is determined to be under the medical examiner's authority, s/he makes a scene investigation, and interviews family and other witnesses to obtain information which will support the medical cause of death and, most importantly, to determine if there is any basis for the death being classified as suicide, accident or homicide. In any of these potential cases, s/he may be required to record the scene in diagram, report and photograph. S/he may collect evidence such

as fiber, firearm, notes or other material. S/he is required to make a judgement, based on interpretation of the evidence, as to the potential for death at the hands of another. Should there be a reasonable potential of a homicide, s/he is to call for the forensic pathologist, homicide investigators, and the crime laboratory before the scene is further disturbed. S/he is to protect the scene - to preserve evidence, as well as the property of the deceased. S/he is to determine the extent, if any, of contamination of the scene by paramedics, police officers, family, or other, specifically as it may pertain to the criminal investigation. S/he examines the body for trauma, and determines the extent and nature of that trauma at the scene in order to ensure the proper investigation that should follow. S/he takes liver and environmental temperatures, and makes other observations mandatory for an opinion on the time and place of death. Should there be indications of infectious disease, appropriate precautions must be observed. If observations support that death may be the result of a sexual assault, a specific immediate work-up for the collection of the evidence, unique to that type of crime, is required. The recognition and collection of hair, for example, may be vital to the proper adjudication of that case. Hit-and-run and other vehicular cases, now prosecuted as straight felony cases rather than vehicular manslaughter, require an intensified investigation similar to that for homicides because of the new importance of the potential court hearing. The responsibility for identification of the dead, and the accurate tagging of the body, as well as the assured protection of the property of the deceased, are all initial responsibilities of the deputy. Therefore, all ledgers, tags and forms must be accurate and properly positioned. Any necessary interagency contact must be timely and proper. Specific requests by other law enforcement agencies must be acted on or transferred to the appropriate section in the office that will assume that responsibility. The clothing must be either properly reviewed or left undisturbed for further criminal investigation. Fingerprints must be taken unless evidence about the hands, such as gunshot residue or fiber evidence, preclude that collection at the time. In addition to safeguarding the evidence, the deputy must properly remove the body from the scene, and seal, secure or release the residence, as appropriate. These are critical steps; if physical evidence is not recognized at the appropriate time, and is not properly collected, photographed or protected, it will typically be lost for any other collection. This will then adversely affect court presentation of the case. There are circumstances unique to each crime scene which, if known to the next individual collecting evidence or working on that case, would favorably affect the manner in which he or she examines the body, collects the evidence and performs appropriate analyses. Therefore, the scene of the death is critically important, and must be properly investigated.

The deputy coroners do not yet receive the appropriate training to completely perform this work. They do not receive specific training on the recognition and collection of evidence. They receive no training on report structure and preparation. There is no training in environmental hazards, toxicants, rescue or safety. They also are not provided with appropriate equipment for investigation or special equipment, such as flashlights or raincoats, for working in inclement weather or in dark, secluded, restricted, or potentially dangerous places. It seems unlikely that a $10,000 a day court case would be built on such a foundation, but that is the common situation, and it must be changed. These inadequacies must be corrected. Better training and equipment are gradually becoming available for the investigators.

The number of deputy coroners is not adequate for the current work-load. The expected increase in court appearances associated with Proposition 8 requirements is occuring and we will need one additional deputy to adjust for the resulting scheduling problems. Current policy does not pay a deputy for a court appearance, which is contrary to California law. There simply is no budget money. Therefore, every possible action is taken to avoid the deputy having to go to court. This is self-defeating, in the aspect that the work of the deputies and their investigative efforts are not fully appreciated. It also produces real evidence and procedural problems for the District Attorney and Public Defender. As more emphasis is placed on the court room presentation of evidence, the collection and documentation of that evidence must be subjected to closer scrutiny Therefore, under Proposition 8, it will most likely be required that all appropriate witnesses are present in court, including the deputy coroners. An additional deputy coroner must be available to fill in for the deputy coroner who is testifying in court. They also must receive appropriate court duty and sick pay.

III. TOXICOLOGY

There are well over 70,000 common drugs and chemicals available on the west coast. Toxicological tests involve the analysis of samples for drugs and poisons. The results of these tests, both positive and negative, assist in the determination of cause of death. Forensic toxicology is concerned with prescription drugs as well as with underground or illegal compounds, many of which are new on the street. Industrial and environmental chemicals and materials are also common forensic problems. This specialty field differs from hospital toxicology, but the requirement for exacting analysis with unquestionable accuracy and specificity is extremely high, typically higher than that needed in the hospital

The toxicology department in this office is also involved in fee-for-service work for other law enforcement agencies, analysis of specimens from homicide suspects, suspects of other major crimes, persons accused of parole violation, felony manslaughter-driving cases and others. These latter samples are all from living persons, and all represent medico-legal cases frequently requiring expert court testimony for the purpose of interpreting the test results. Research grants to evaluate the presence or absence of toxins and drugs in the community are also performed in our toxicology department.

Our toxicology laboratory has made some major advances in the past few years. Current funding includes capital improvement money to expand the toxicology laboratory space. However, we have only the minimum instrumentation necessary to perform forensic toxicology analyses. For thirty years, the senior toxicologist (who owned his own laboratory) performed the analyses that we could not do at this office at his own facility. This complicated chain of custody and quality control problems. However, for the time period involved, these problems were not major considerations. Now, that person has retired and the laboratory must be independent. Therefore, we must invest in good quality instrumentation and trained personnel to perform these analyses.

It is our plan that testing of specimens received from outside of San Francisco county will generate significant revenues to help offset, in large part, the ad valorum tax base for the department. Surveys have indicated that there is a significant market which is potentially available. In order to generate this revenue, the department must be able to perform accurate and

rapid testing. To offer this fee-for-service work and to continue to obtain grants, we must have the proper equipment and staffing. Currently, staffing is short a Forensic Toxicologist position which was deleted from the budget because of Proposition 13 reductions. Funding of that position, plus a change of the laboratory manager/research coordinator position from part time to full time, and the addition of the necessary instrumentation, would bring this department up to the necessary capability.

IV. AUTOPSY FACILITIES

In the past we have had a part time person working from 4 to 8 P.M. This was an advantage to us because it allowed autopsies to extend into the late afternoon; it was an advantage to the funeral directors and families because the patients could be picked up and funeral preparations started the day of the autopsy. If possible, we would like to have this staff position reinstated. Infectious disease protection needs to be improved.

This department needs a considerable amount of instruments and equipment to perform forensic autopsies properly. This includes surgical instruments, autopsy saws, equipment to better work with infectious cases, and photographic equipment to document autopsy findings for potential court room presentation or as evidence in a criminal hearing.

V. INQUEST DIVISION

This division is considered to be adequately staffed for the current work-load. We would like to reinstate some transcriber time reduced in the past by Propsition 13.

VI. FORENSIC PATHOLOGY DIVISION

We have instituted an excellent teaching program, under the direction of one of our Assistant Medical Examiners, Dr. J. Ferrrer. This is a program to train forensic pathologists, and is approved as a fellowship training program for specialty certification by the AMA. We are also certified by the National Associaton of Medical Examiners. Such training also benefits the deputies, District Attorney and Public Defender through monthly or other teaching programs.

Because of the training program, and the increasing court requirements for testimony, we need to add another board certified forensic pathologist to our staff. Additionally, we need to make Dr. Ferrer a permanent employee, a problem Civil Service is trying to help us with. Some equipment needs replacing in this department and we need to add or update other items. Additionly, we need to increase the infectious disease training and protection for all personnel in this department.

ONE-YEAR PLAN - 1984-1985

This plan is based on the completion of the following stages during 1983-84:

1. Completion of toxicology expansion with new laboratory space
2. Procurement of authorized equipment for pathology laboratory
3. Staffing of part-time laboratory manager/research coordinator position
4. Increase staffing level

The major goal for 1983-84 is the continued upgrading of the toxicology department. Instrumentation is the primary need. This includes the following:

Graphite furnace or flameless atomic absorption
HPLC chromatography
Radioimmunoassay
Auto-injection equipment for current or new GLC
Replacement of electron capture detector with new equipment
Replacement and updating of current gas chromatography equipment with state of the art instruments
Replacement equipment with direct on-line capability with tie in to police computer for report preparation, availability and library capability
Replacement of light microscope with double headed instrument with automatic exposure equipment for microphotography
Addition of walk-in refrigerator space to accomodate the expected increase in specimens for toxicology testing

Note: Many of these instruments require special installation, special preparation equipment, such as dilutors, storage and disposal facilities for waste, and expendable supplies.

THREE YEAR PLAN

This plan is predicated on procurement of adequate equipment, instrumentation and staff to perform excellent quality forensic medicine and to have the capacity to expand the fee-for-service capabilities. Attainment of these capabilities depends on the following:

Staffing of permanent full-time position for a laboratory manager/research coordinator.

Initiating an active advertisement and competitive program for obtaining toxicology work from law enforcement agencies outside of San Francisco City and County. We believe that such a program could be expected to generate gross revenues of $200,000 to $500,000 per year.

Maintaining the current level or slightly increasing the level of forensic pathology and forensic medicine consultations with expected gross revenues of $40,000 to $50,000 per year.

Increasing the amount of medical and forensic research performed in the department. Besides being uniquely able to gather basic information on a wide variety of conditions existing in our community, to survey for the presence or absence of disease, and to monitor trends of drug use and abuse, we are able to do many types of work in the community. While research projects usually do not bring money in to the department, they do create jobs, gather valuable medical knowledge, and may provide equipment and instruments that this office otherwise could not obtain. Since much of the data pertaining to traumatic and other types of unnatural deaths in San Francisco originate in this office, we should develop and enlarge our research capabilities.

Changing all office equipment to CRT with capability of modum interface with central facilites, i.e. City Hall. This would allow direct interface with the Controller, Purchaser and Budget offices, as well as reduce the time delays and problems associated with indirect contact and inter-office distances.

Converting record-keeping systems to microfilm. Although there is a significant initial start-up cost. the long range cost savings (for top quality paper for permanent report preparation and for binding into permanent books) and the problems of having only one copy of these legal documents will more than pay for this service. Microfilming of records would free up storage space and costs, and would allow several copies of records to be available at a number of stations at the same time. Recovery and search of records would be easier and more convenient. At least one printing unit is included in this proposal so that the sale and availability of these documents would not be reduced.

Replacing the office furniture. Most of the seating equipment, which is used 24 hours daily, is worn beyond repair. A systematic program for replacing and upgrading this equipment should be

initiated during this period.

Replacing the inner-office communication system. The current system must be replaced with an appropriate unit.

Making capital changes in the facilities. Flooring in the main office and public entrance way should be replaced during this time period.

FIVE YEAR PLAN

The primary goal to be attained within the next five years is to provide the investigators and forensic staff with the training and equipment necessary to perform the jobs required of them in an accurate and expeditious manner. It is another part of this goal to make certain that the laboratories are well-equipped and that the toxicology laboratory is cost efficient, recovering all, or at least the majority of its operating costs. Achievement of this goal is contingent on the following:

Upgrading and replacing equipment and instruments as required.

Adding new instrumentation as justified by current state of the art and judicial needs.

Continuing training of investigators and forensic staff.

Continuing administrative and office improvements as required.

Initiating direct on-line computer capability for laboratory and administrative facilities.

Increasing the number of inquests and having them presided over by a law judge.

Attempting to have one or more of the national Forensic meetings convene in San Francisco.

Continuing law enforcement and medical education programs, with the potential of becoming an education center for forensic training.

DEPARTMENTAL

ADMINISTRATION

MBO - PERFORMANCE MEASURES AND GOAL ACHIEVEMENTS DURING 1982-83

04A Objective measure - to complete all personnel evaluations within 3 days of anniverary dates.

Only 50% (16) of the goal (33) number of evaluations was attained during this fiscal year. However, the total number of evaluations completed reflects the new and revised evaluation procedures which have been instituted in the office. It is anticipated that the goal of completion of all personnel evaluations within 3 days of the anniversary date will be accomplished within the 1983-84 fiscal year.

04B Objective measure - to maintain out-of-county consultations by the Chief Medical Examiner at the 1981-82 level to provide revenue to the office.

During the previous fiscal year of 1981-82, there 66 out-of-county consultations at this level. This objective was not met--there was a total of 37 out-of-county consultations by this office during the fiscal year with the largest number in any quarter, 24, being realized in the 4th quarter of this fiscal year. The number of out-of -county consultations provided by this office is dependant upon requests from ou-of-county agencies. These requests in turn, are determined by the needs of the out-of-county agencies relative to difficult and complex cases. Other than informing other agencies ot the capabilities of this office and the availability of consultant services, this office cannot control the number of consultation requests made.

04C Objective measure - to establish and maintain quarterly records of time spent by the Chief Medical Examiner on in-county court cases.

This objective was attained. Quarterly records of time spent by the Chief Medical Examiner on in-county court cases during the fiscal year of 1982-83 show that the Chief Medical Examiner appeared in court 70 times and spent a total of 505 hours in consultations, preparation, and court appearances.

04D Objective measure - to effect identification of at least 90% of unidentified cases within 15 days.

This goal was reached. Of a total of 156 unidentified cases, 92% were identified within 15 days.

04E Objective measure - to increase the experise of field investigators by implementing 20 hours of training per investigator.

Although this goal was not attained, the amount of investigator training in fiscal year 1982-83 increased over that in 1981-82. During 1982-83, 12 investigators recieved some training, 2 more individuals that the goal of 10 investigators. However, the number of hours of training averaged 1 hour per investigator rather than the goal of 20 hours per investigator. As in the previous fiscal year, the number of investigators is not sufficient to provide coverage of absences of other investigaors who are attending seminars and training sessions away from the office.

04F Objective measure - to transcribe all traumatic gross autopsy reports within 24 hours of completion of the autopsies.

This objective was attained. Gross autopsy reports from the 187 traumatic death cases recieved by this office were all transcribed within 24 hours of the autopsy.

04G Objective measure - to transcribe all non-traumatic gross autopsy reports within 5 days of completion of the autopsies.

This objective was nearly attained--75% of the gross autopsy reports from cases of non-traumatic death were transcribed within 5 days of completion of the autopsies. During this fiscal year, the transcription of a large back-log of cases was completed and transcription was brought up-to-date.

04H Objective measure - to establish and maintain time records for determining the cause of death and issueing the death certificate.

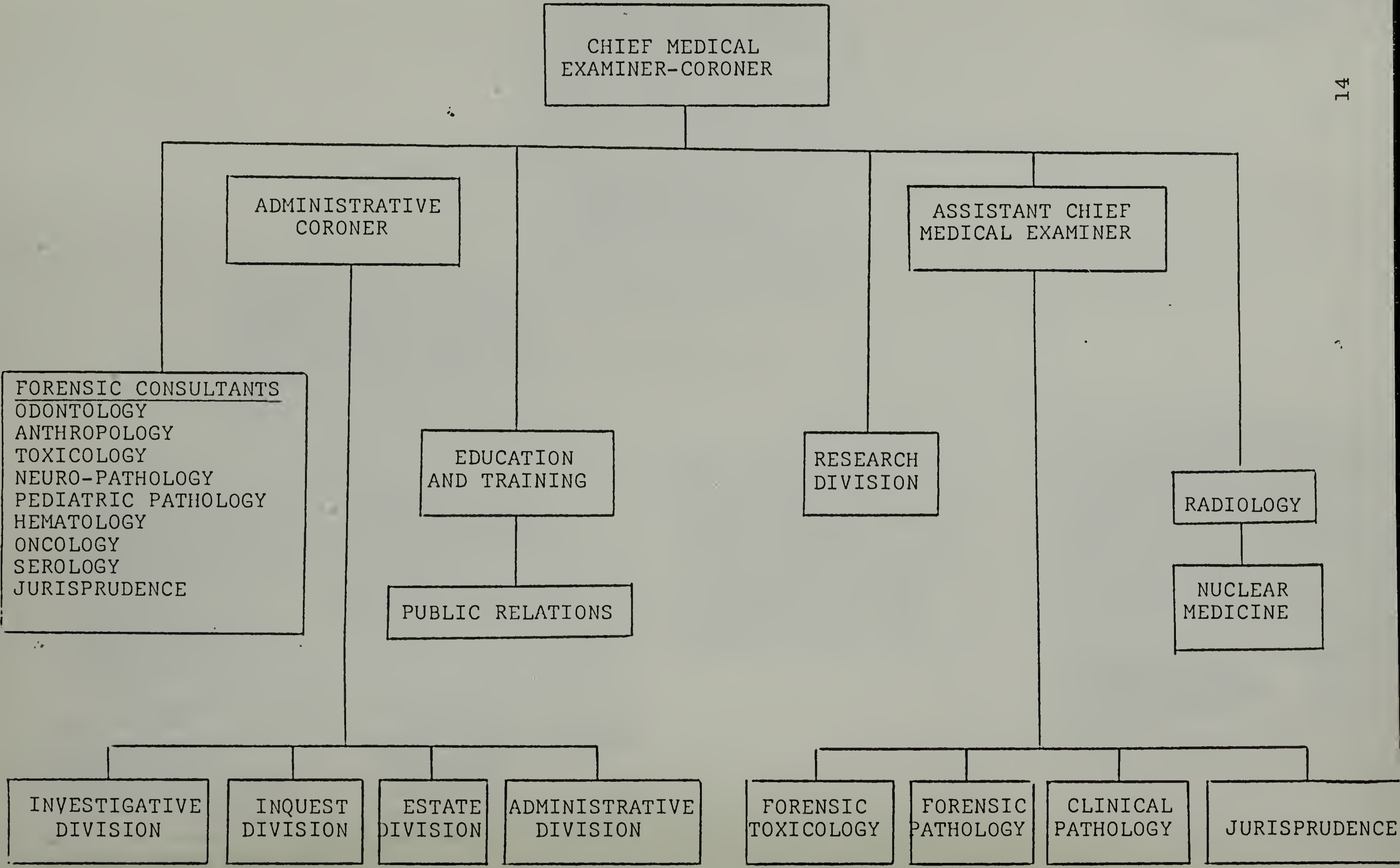
Time records for the purpose of determining the time required for establishing a cause of death and using a death certificate in each case were developed and maintained. Information from these records indicates that an average of 21 days was required for both determining a cause of death and issuing a death certificate in all cases. This time interval closely approaches but does not quite meet the target of 19.5 days. Determination of the causes of death in complex and difficult cases will take more time than in routine cases. The number of such difficult cases in a year is not possible to predict and will influence the value of the average number of days required to determine a cause of death.

DEPARTMENTAL COSTS

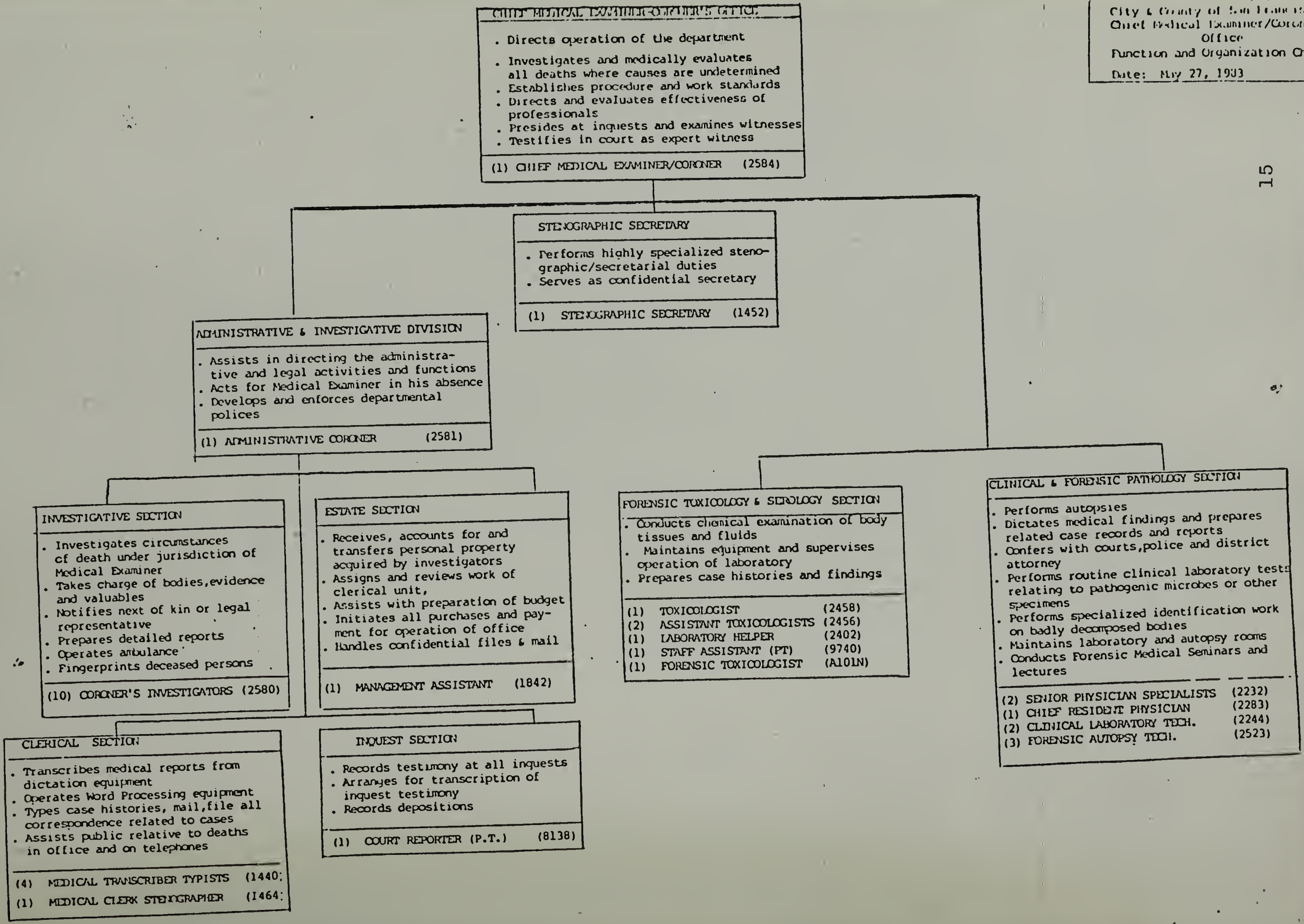
1982 - 83

Total Budget	$1,248,845.00
Transfers to the Controller, Health and Retirement	183,262.00
NET BUDGET (all other costs)	1,065,583.00
Total cases	3,894.
Cost per cases investigated	$ 274.00
Revenues (sales of records, public auctions, fee-for-service work)	$ 37,096.00
Total Costs *Ad Valorum* Taxes Per Case Investigated	$ 264.00

As indicated elsewhere, this includes all investigative, administrative, scientific and expert witness costs to the county.


CHIEF MEDICAL EXAMINER-CORONER
ADMINISTRATIVE CORONER
ASSISTANT CHIEF MEDICAL EXAMINER
FORENSIC CONSULTANTS
ODONTOLOGY
ANTHROPOLOGY
TOXICOLOGY
NEURO-PATHOLOGY
PEDIATRIC PATHOLOGY
HEMATOLOGY
ONCOLOGY
SEROLOGY
JURISPRUDENCE
EDUCATION AND TRAINING
PUBLIC RELATIONS
RESEARCH DIVISION
RADIOLOGY
NUCLEAR MEDICINE
INVESTIGATIVE DIVISION
INQUEST DIVISION
ESTATE DIVISION
ADMINISTRATIVE DIVISION
FORENSIC TOXICOLOGY
FORENSIC PATHOLOGY
CLINICAL PATHOLOGY
JURISPRUDENCE

City & County of San Francisco
Chief Medical Examiner/Coroner'
Office
Function and Organization Chart
Date: May 27, 1983



CHIEF MEDICAL EXAMINER-CORONER'S OFFICE

- Directs operation of the department
- Investigates and medically evaluates all deaths where causes are undetermined
- Establishes procedure and work standards
- Directs and evaluates effectiveness of professionals
- Presides at inquests and examines witnesses
- Testifies in court as expert witness

(1) CHIEF MEDICAL EXAMINER/CORONER (2584)

STENOGRAPHIC SECRETARY

- Performs highly specialized stenographic/secretarial duties
- Serves as confidential secretary

(1) STENOGRAPHIC SECRETARY (1452)

ADMINISTRATIVE & INVESTIGATIVE DIVISION

- Assists in directing the administrative and legal activities and functions
- Acts for Medical Examiner in his absence
- Develops and enforces departmental polices

(1) ADMINISTRATIVE CORONER (2581)

INVESTIGATIVE SECTION

- Investigates circumstances of death under jurisdiction of Medical Examiner
- Takes charge of bodies, evidence and valuables
- Notifies next of kin or legal representative
- Prepares detailed reports
- Operates ambulance
- Fingerprints deceased persons

(10) CORONER'S INVESTIGATORS (2580)

ESTATE SECTION

- Receives, accounts for and transfers personal property acquired by investigators
- Assigns and reviews work of clerical unit,
- Assists with preparation of budget
- Initiates all purchases and payment for operation of office
- Handles confidential files & mail

(1) MANAGEMENT ASSISTANT (1842)

CLERICAL SECTION

- Transcribes medical reports from dictation equipment
- Operates Word Processing equipment
- Types case histories, mail, file all correspondence related to cases
- Assists public relative to deaths in office and on telephones

(4) MEDICAL TRANSCRIBER TYPISTS (1440:
(1) MEDICAL CLERK STENOGRAPHER (1464:

INQUEST SECTION

- Records testimony at all inquests
- Arranges for transcription of inquest testimony
- Records depositions

(1) COURT REPORTER (P.T.) (8138)

FORENSIC TOXICOLOGY & SEROLOGY SECTION

- Conducts chemical examination of body tissues and fluids
- Maintains equipment and supervises operation of laboratory
- Prepares case histories and findings

(1) TOXICOLOGIST (2458)
(2) ASSISTANT TOXICOLOGISTS (2456)
(1) LABORATORY HELPER (2402)
(1) STAFF ASSISTANT (PT) (9740)
(1) FORENSIC TOXICOLOGIST (A101N)

CLINICAL & FORENSIC PATHOLOGY SECTION

- Performs autopsies
- Dictates medical findings and prepares related case records and reports
- Confers with courts, police and district attorney
- Performs routine clinical laboratory tests relating to pathogenic microbes or other specimens
- Performs specialized identification work on badly decomposed bodies
- Maintains laboratory and autopsy rooms
- Conducts Forensic Medical Seminars and lectures

(2) SENIOR PHYSICIAN SPECIALISTS (2232)
(1) CHIEF RESIDENT PHYSICIAN (2283)
(2) CLINICAL LABORATORY TECH. (2244)
(3) FORENSIC AUTOPSY TECH. (2523)

FORENSIC

INQUIRY

MBO - PERFROMANCE MEASURES AND GOAL ACHIEVEMENTS DURING 1982-83

06A Objective measure - to increase by 10% over last year the toxicological examinations of out-of-county referrals in order to increase revenues to the office.

The target for this fiscal year was 6 cases. This target was exceeded--the actual number of cases referred from outside of the county for toxicological testing was 10.

06B Objective measure - to decrease turnaround time by 10% for Coroner's toxicological tests over last year in order to decrease the waiting period for completion of death certificates and other legal documents.

A total of 1,779 Coroner's cases were submitted for toxicological testing. The goal of testing 98% of these cases was not reached during the first quarter of the fiscal year when only 60% of the submitted cases were tested. In the second quarter, the target of 98% was approximated when 96% of the submitted cases were tested. During the third and fourth quarters, the target of 98% was exceeded. During these last two quarters, 100% of the cases submitted were tested. The turnaround time (the average number of days required for toxicology tests to be completed) decreased from 23 days in the first quarter, to 13 in the second quarter, and to 4 days in both the third and fourth quarters. The turnaround time of 4 calendar days was one-half of the target turnaround time of 8 days. The number of outstanding cases at the end of each quarter decreased from a high of 69 cases at the end of the second quarter, to 22 at the end of the third quarter, to 11 at the end of the fiscal year.

During the first quarter of the fiscal year, the low percentage (60%) of cases tested, the high turnaround time (23 days), and the large number of outstanding cases (59) at the end of the quarter, all reflect the loss of personnel which occured during the last quarter of 1981-1982. Starting with the second quarter of 1982-83, the improved performance measures demonstrate the addition of 2 full-time positions and a subsequent concerted effort to maximize the overall performance of the toxicology laboratory.

06C Objective measure - to decrease turnaround time by 5% for Coroner's pathology tests over last year in order to decrease waiting time for completion of death certificates and other legal documents.

A total of 1,048 Coroner's cases were submitted for pathology tests. The number of days required for completion of testing, the turnaround time, decreased from 27 days in the first quarter to 24 days in the fourth quarter. This was an 11% decrease, exceeding the target of a 5% decrease.

06D Objective measure - to increase to 18.5% the number of Coroner's cases which are tested for common abuse drugs.

The average percentage of Coroner's cases over all four quarters of the fiscal year whch were tested for common abuse drugs was 17.25%, nearly meeting the target of 18.5%. In the last quarter, 20% of Coroner's cases were tested for common abuse drugs, a figure which exceeded the target.

06E Objective measure - to decrease turnaround time by 50% over last year for toxicological testing of persons accused of, or victims of major felonies.

Specimens from persons accused of, or from victims of major felonies were recieved on a total of 52 cases, less than the target of 61 cases. The average number of cases in which testing was not completed by the end of the quarter was 2.5. The average number of days required to complete testing on these cases was 15.75 calendar days over the fiscal year.

06F Objective measure - to complete autopsies on all non-traumatic deaths within 12 hours.

All autopsies on the 1,626 non-traumatic deaths which were received were completed within 12 hours, meeting the target.

06G Objective measure - to complete autopsies on traumatic deaths within 24 hours.

All (100%) of the autopsies on the 187 traumatic death cases received were completed within 24 hours, meeting the target for this objective.

06H Objective measure - to establish and maintain quarterly records of time spent by the Forensic Toxicologist on in-county court cases.

Records of the amount of time the Forensic Toxicologist spent on in-county court proceedings were established and maintained during this fiscal year. These records show that the Forensic Toxicologist made 28 court appearances, spending 80 hours in court and 68 hours in consultations.

06I Objective measure - to maintain turnaround time for serology tests.

During this fiscal year, specimens from 103 cases of sexual assault in juveniles were submitted for serological testing. The average

number of days required for completion of this testing was 30 over all four quarters, but only 24 days over the first 3 quarters.

During the fourth quarter, the individual responsible for preparation of the serology reports left the office. The increase in turnaround time reflects the time that was required to train other personnel to perform the tasks associated with report preparation. It is anticipated that the turnaround time will decrease to the former level once these personnel acquire experience in these tasks.

FISCAL YEAR 1982-83

Total Deaths in County		8,106
Total Deaths Reported to Coroner		3,894
Cases Reported, Investigated and Cleared by the Coroner or physician's signature		2,076
Coroner's Cases		1,818
% Reported to Coroner	48.0	
% County Deaths Having Coroner's Autopsies	22.2	

Cases Accepted by Coroner

1.	Natural Deaths	1,135	(62.0%)
2.	Accidents	319	(17.5%)
3.	Suicides	173	(9.5%)
4.	Homicides	103	(5.7%)
5.	Mode Equivocal	39	(2.1%)
6.	Cause Unknown	12	(0.7%)
7.	Sudden Infant Death Syndrome	19	(1.0%)
8.	Cause Undetermined................	4	(0.2%)

Autopsies performed	1,802
Autopsy Index	99.1%

Burials Authorized by Coroner

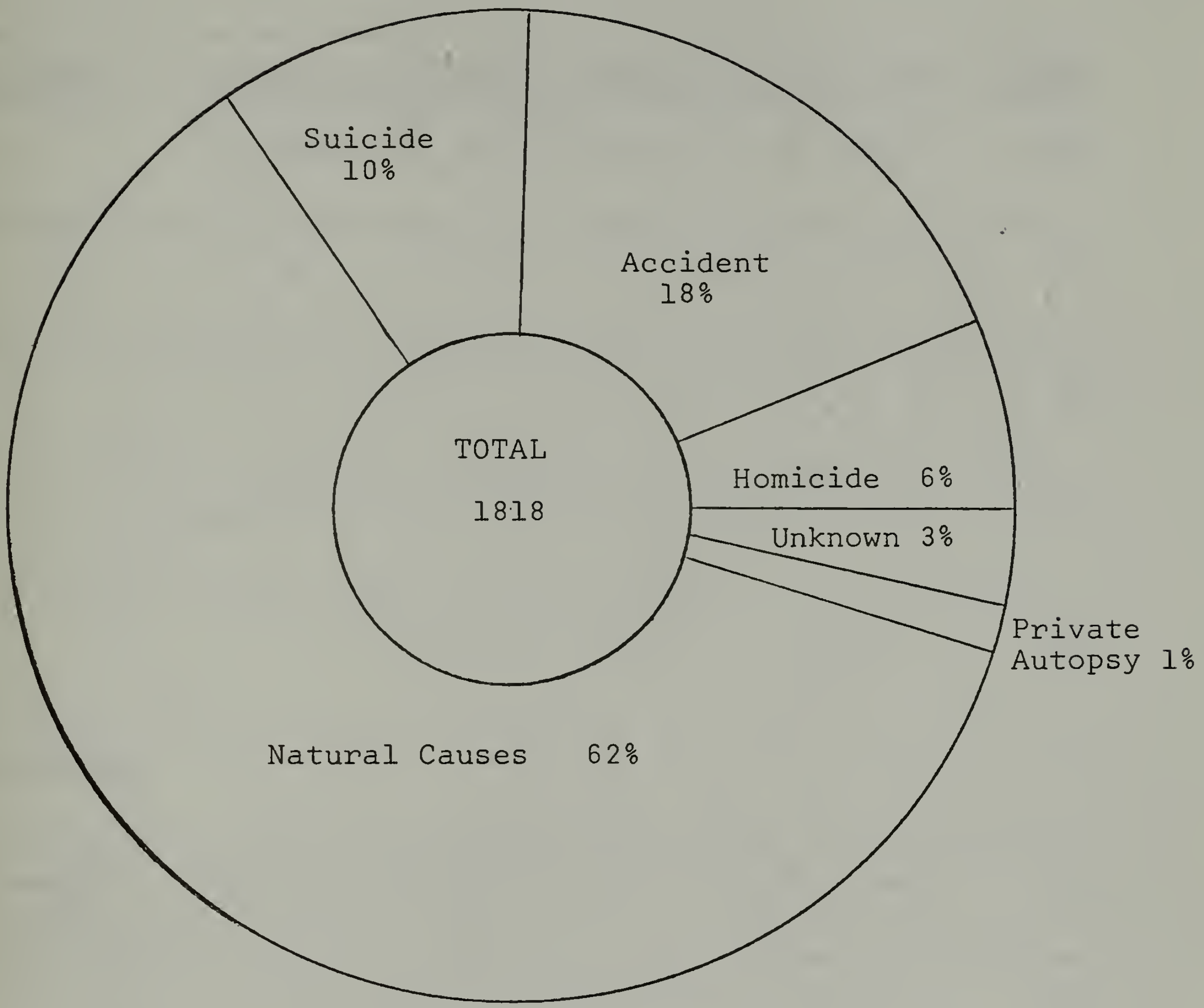
1.	Indigents and fetuses buried by City	141
2.	Veterans buried by funeral home (Rotation)	14
3.	Cases buried by funeral home with Public Administrator-controlled funds	48

Inquests Held or Depositions Taken	52

Identification

1.	Persons brought to Coroner's Office with insufficient identification	157
2.	Persons subsequently identified by fingerprints, dental X-rays or other means	147
3.	Persons buried as unidentified	10
4.	Fingerprints taken and forwarded to FBI, CII, or SFPD	1,778

MEDICAL EXAMINER CASES FOR 1982-1983



MEDICAL EXAMINER CASES

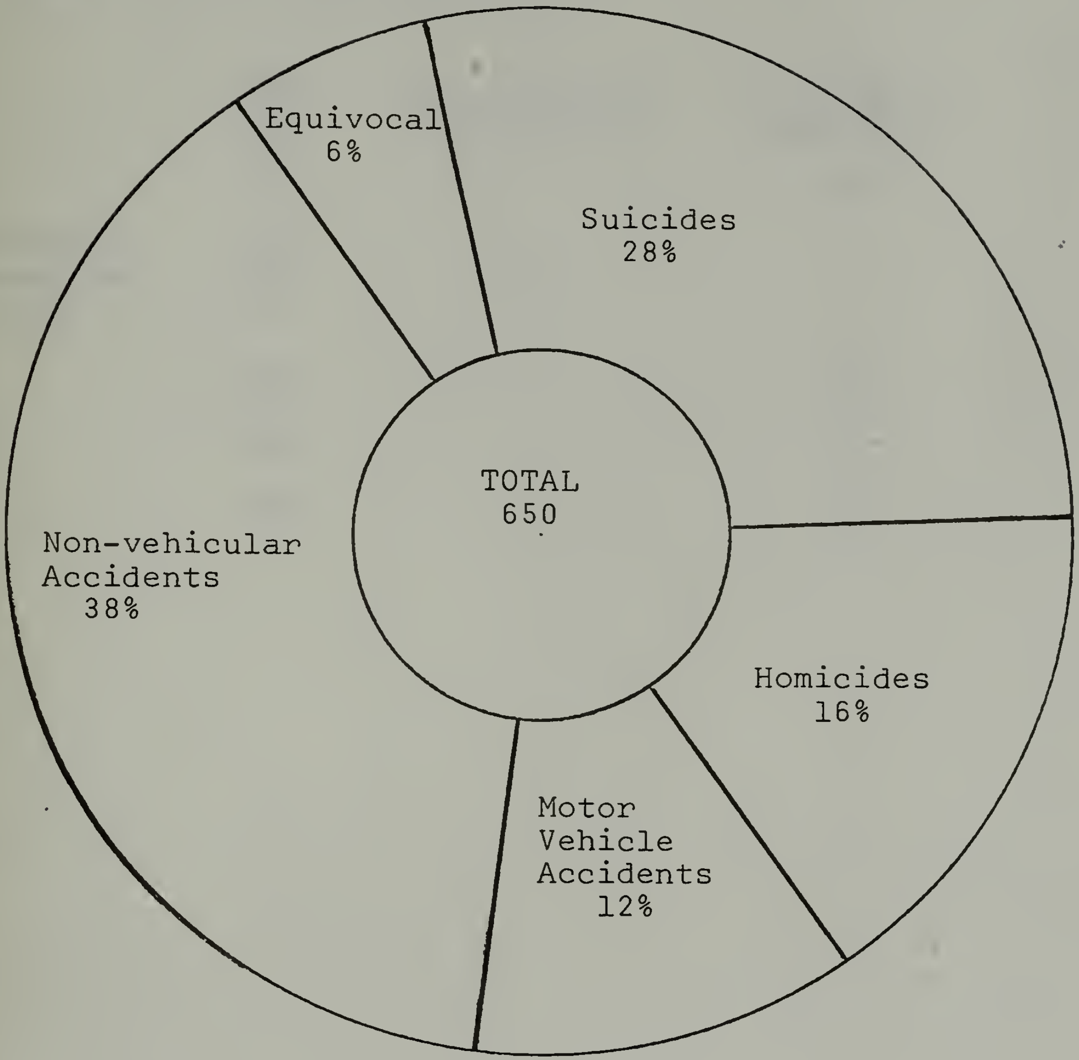
1982-1983

Monthly Comparison

MANNER OF DEATH	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
Natural	84	100	84	90	99	111	115	87	95	90	102	78	1135
Unknown	0	0	1	0	2	3	2	0	0	0	2	2	12
Equivocal	3	3	4	4	6	3	2	1	5	4	2	2	39
Suicide	20	15	12	14	15	13	13	14	21	12	9	15	173
Homicide	9	8	7	10	10	10	7	10	4	7	14	7	103
Industrial Accident	0	0	0	1	0	2	0	0	0	1	0	0	4
Accident--Other	24	18	18	22	29	20	17	14	16	20	21	22	241
*SIDS	1	2	1	2	1	3	2	1	1	2	1	2	19
Cause Undetermined	0	0	0	1	0	1	0	1	0	0	0	1	4
PRIVATE AUTOPSIES	1	1	1	2	0	2	0	0	2	0	3	2	14
TOTALS	145	152	134	155	168	176	163	133	151	143	161	137	1818

*SIDS - Sudden Infant Death Syndrome

VIOLENT DEATHS



Violent deaths are those caused by any non-natural means, including drugs. In San Francisco, 650 violent deaths occurred during the fiscal year 1982-83, accounting for 36% of the Medical Examiner death investigations.

VIOLENT DEATHS

Of the 1,818 deaths investigated by the Coroner's Office during 1982-83, 650 were determined to be the result of violence.

Mode	Total No.	% of Coroner's Cases	% of County Deaths
ACCIDENT	319	18	3.9
Motor vehicle	74	4	
Non-vehicular	241	13.0	
Industrial	4	1	
SUICIDE	173	10	2.1
HOMICIDE	103	6	1.2
EQUIVOCAL	55	3	0.6

VIOLENT DEATHS

Racial Distribution

RACE	Accident	Suicide	Homicide	Mode Equicocal	TOTAL
Caucasian	241	145	62	37	485
Black	49	12	31	8	100
Asian and Other	29	16	10	10	65
TOTALS	319	173	103	55	650

Distribution by Sex

Male	213	123	74	31	441
Female	106	50	29	24	205
TOTALS	319	173	319	55	650

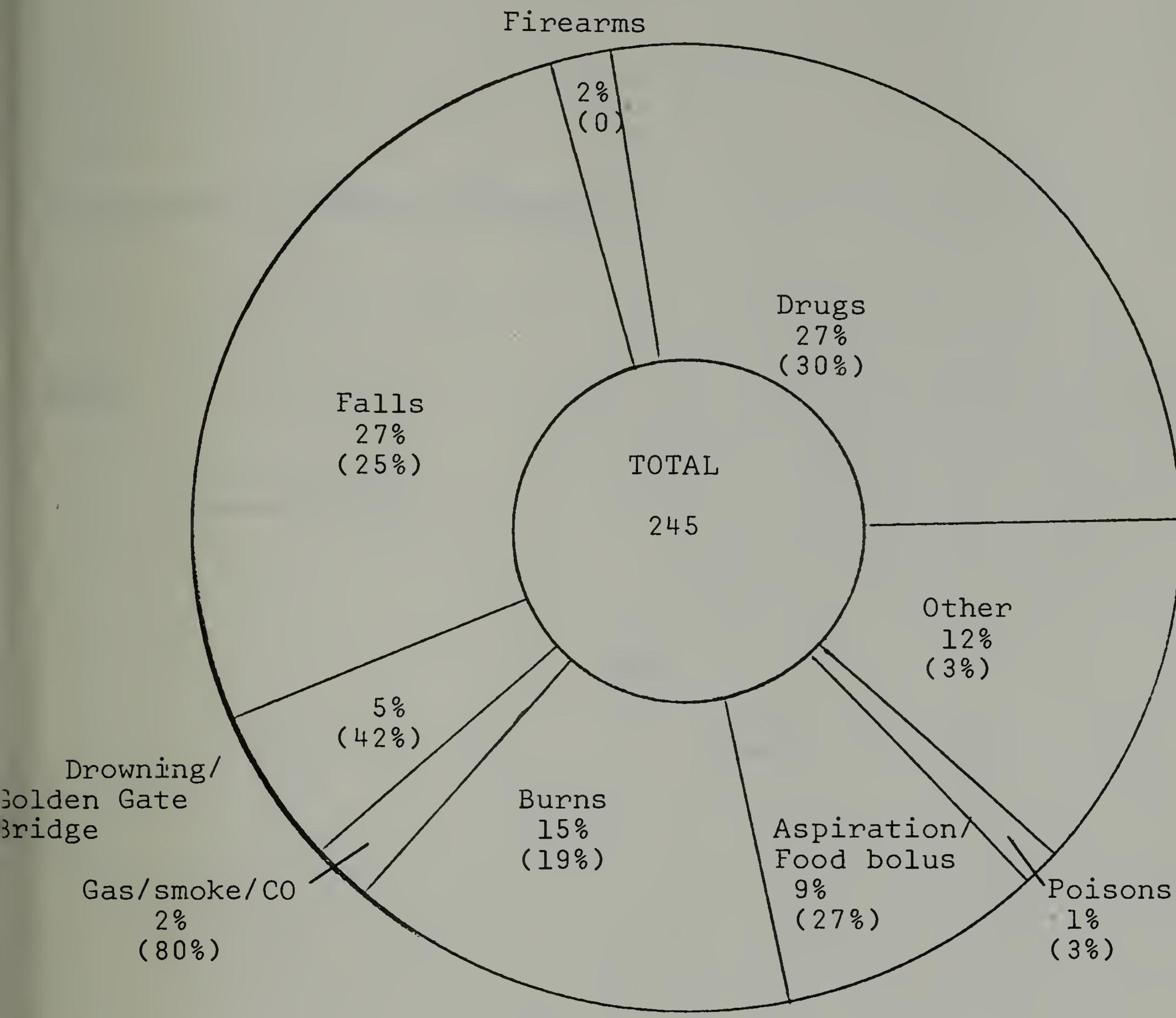
VIOLENT DEATHS

MODE OF DEATH--YEARLY COMPARISON

YEAR	Motor Vehicle	Non-Vehicular	SUICIDES	HOMICIDES	TOTALS
71-72	113	352	206	110	781
72-73	122	319	227	94	884
73-74	82	256	220	137	695
74-75	89	349	224	126	788
75-76	105	363	195	151	814
76-77	75	226	233	149	683
77-78	81	271	194	145	691
78-79	94	246	233	103	676
79-80	94	199	208	114	615
80-81	106	191	179	136	612
81-82	74	240	183	132	629
82-83	74	245	173	104	596

NON-VEHICULAR ACCIDENTS

This category includes all unintentional fatalities except for traffic deaths. there were 240 accidental deaths which accounted for 14% of the Medical Examiner death investigations for the fiscal year of 1982-83.



The percent in brackets indicates the percentage of victims in the category with a positive blood ethyl acohol concentration.

INDUSTRIAL ACCIDENTS

1982-1983

Total Number of Industrial Accidents 4

MEANS

Traumatic Injury 4

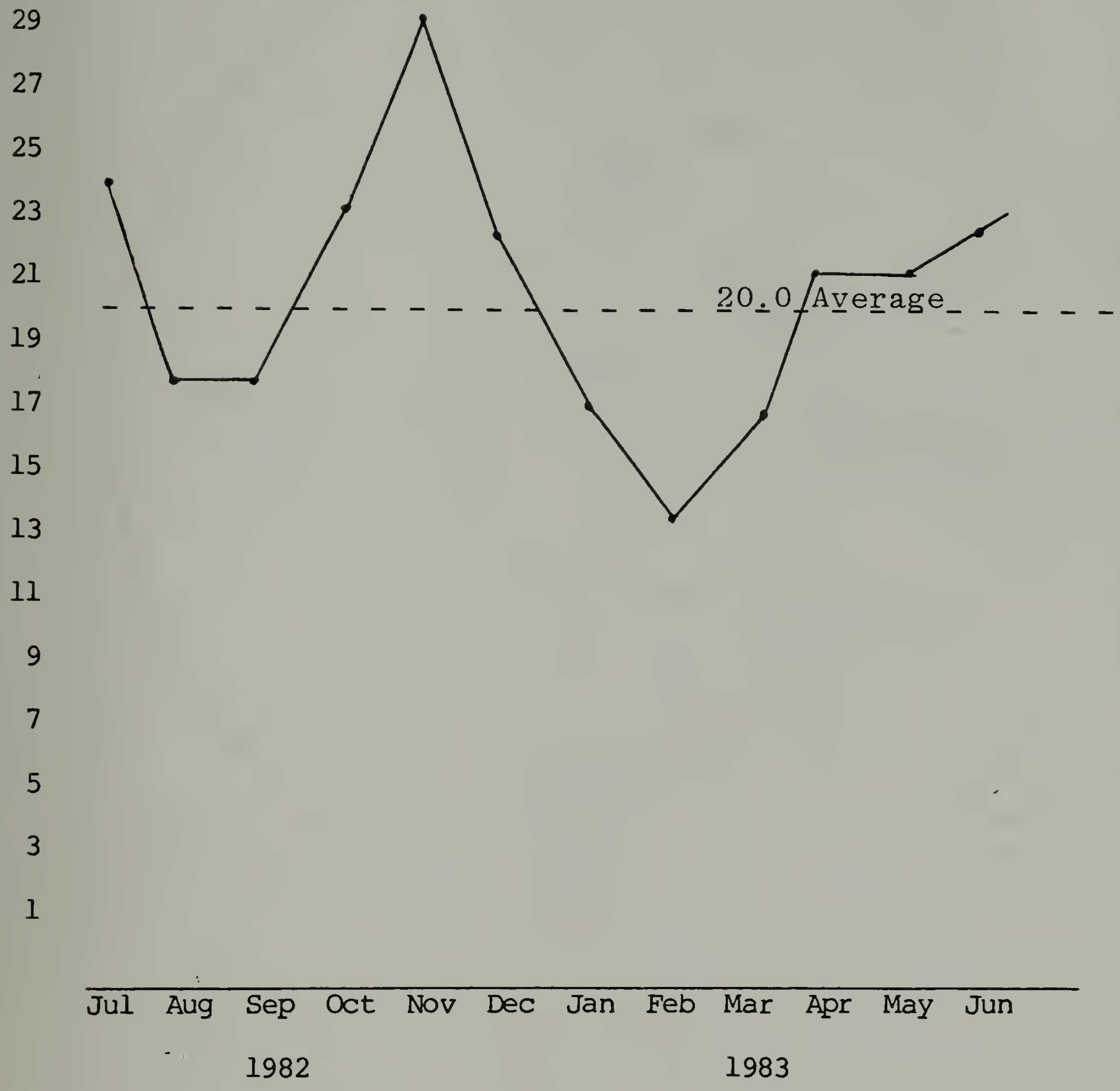
SEX

Male . . . . . 4 Female 0

ACCIDENTS

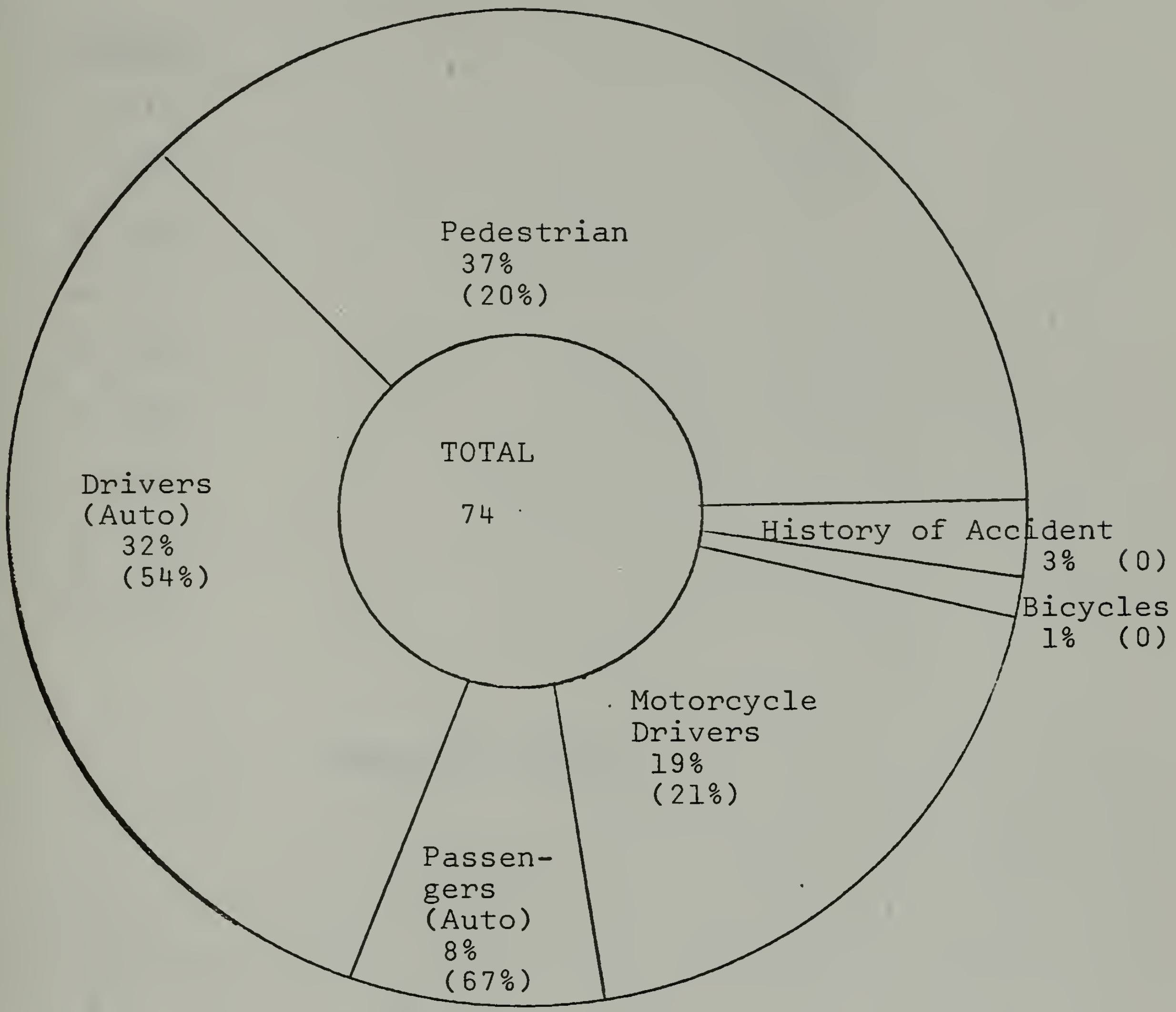
(Including Industrial)

Comparison by Month



TRAFFIC

In San Francisco, there were 74 traffic-related fatalities, accounting for 4% of the Medical Examiner death investigations for the fiscal year of 1982-83.



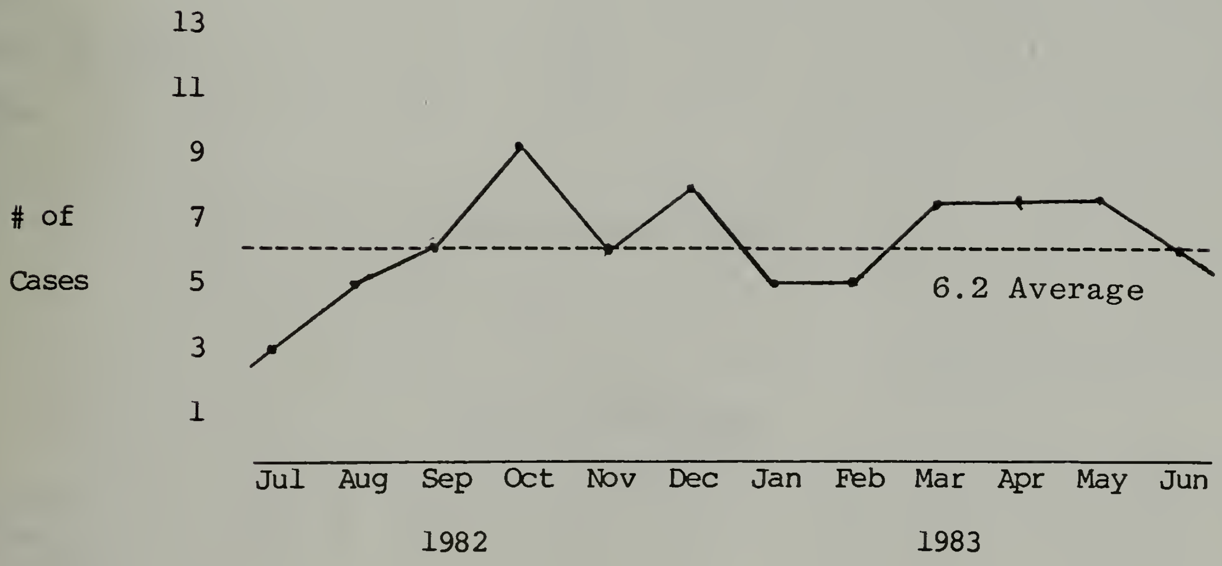
The figure in brackets indicates the percentage with positive blood ethyl alcohol.

TRAFFIC (VEHICULAR) DEATHS

Comparison by Age

Age Group	Number
0 - 19	6
20 - 29	17
30 - 39	12
40 - 49	10
50 - 59	8
60 - 69	6
70 - 79	7
80 - 89	7
90 - 99	1

Comparison by Month



ACCIDENTAL DEATHS

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Tot.
TOTAL MONTH	27	23	24	32	35	30	22	19	23	28	28	28	319
Male	17	12	15	19	27	23	14	15	15	20	20	16	213
Female	10	11	9	13	8	7	4	8	8	8	8	12	106
MANNER OF DEATH													
Drugs	8	5	5	5	15	9	4	3	4	1	4	6	69
Aspiration/ food bolus	3	1	1	4	2	1	1	1	3	2	0	2	21
Drowning	0	0	1	0	3	0	1	2	2	1	1	1	12
Asphyxia	0	0	0	0	0	1	1	0	0	0	1	0	3
Firearms	0	0	0	0	1	0	0	0	0	0	0	0	1
Gas/Smoke/CO Inhalation	1	0	0	0	0	0	0	0	0	1	0	1	3
Burns	3	4	4	3	0	2	2	5	3	3	4	5	38
Falls	8	8	4	7	4	3	5	3	3	10	7	6	68
Toxic Poison	0	0	0	0	0	2	0	0	0	0	0	0	2
Other	1	0	3	4	4	4	3	0	1	3	4	1	28
MOTOR VEHICLE DEATHS													
	3	5	6	9	6	8	5	5	7	7	7	6	74
RACIAL COMPARISONS													
Caucasian	20	16	22	25	27	22	16	13	17	23	18	22	241
Black	3	5	2	4	6	5	5	5	4	1	4	5	49
Asian and Other	4	2	0	3	2	3	1	1	2	4	6	1	29

SUICIDE

The determination of suicide as a manner of death represents the summation of scene investigation, including a review of psychological state, autopsy, pathology, toxicology and, frequently, other investigation. To the best of our knowledge, this is the only Coroner's Office performing toxicology on multiple organs and/or body fluids routinely in order to evaluate the metabolic status of a drug or drugs.

Realizing the immense emotional impact on family, the diagnosis of suicide is never made lightly, and always represents a decision made on the basis of data sufficient to defend that decision in a court of law, if necessary. Should these data be inconclusive, the victim automatically gets the benefit of the doubt.

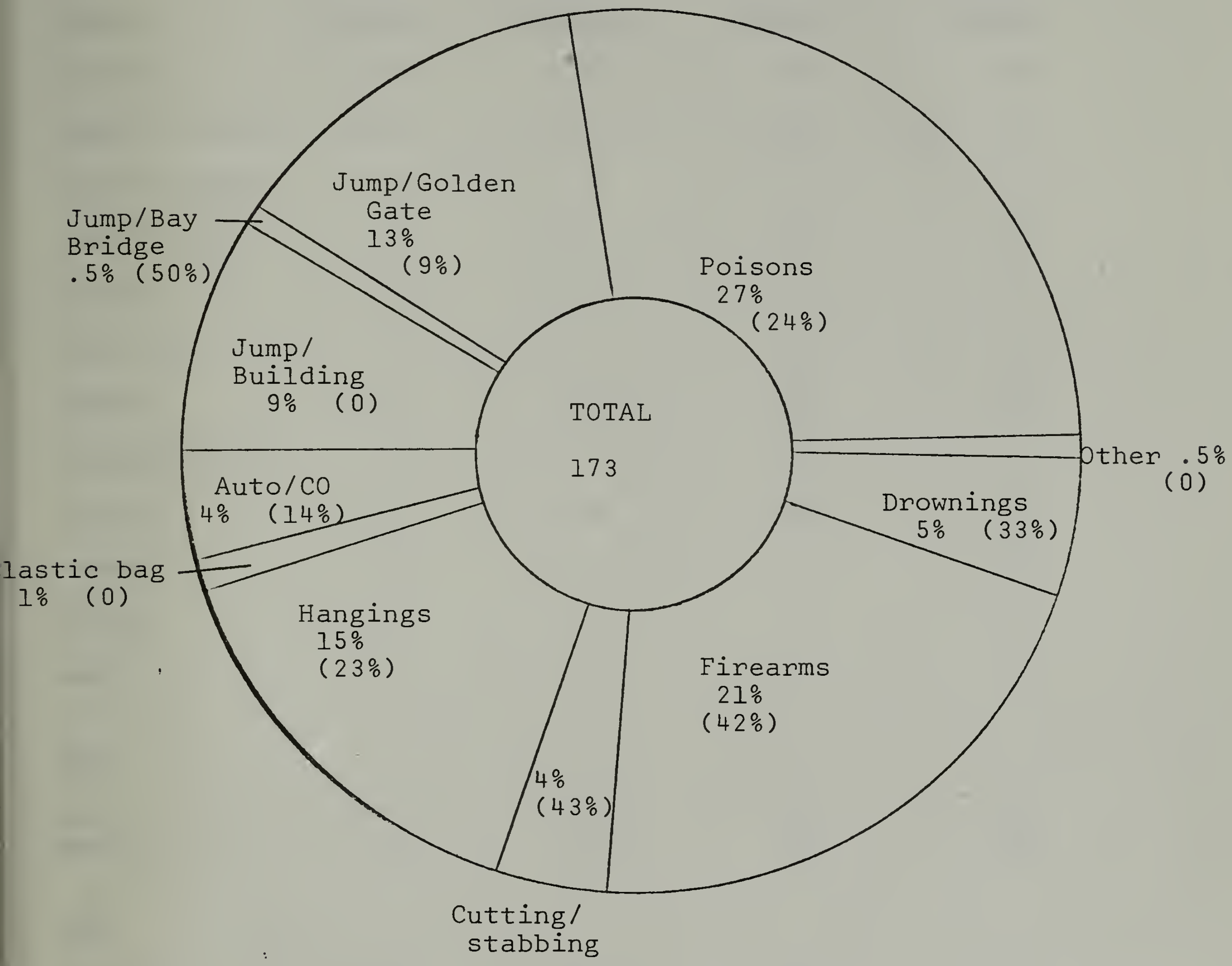
Suicide takes a tremendous toll of our young people. The relative number jumping from the Golden Gate bridge would not seem to warrant the publicity assigned them as compared to the evident need for help for individuals using other methods.

To help understand the problem, and, hopefully, to aid in reduction of suicides, this office has supported suicidology research and prevention programs for many years. It is hoped that this work will help to reduce this needless loss.

The majority of these deaths are situational reactions, and, given momentary trained support, are potentially preventable.

SUICIDES

Suicides are self-inflicted deaths. In San Francisco, 173 suicides occurred, accounting for 10% of the Medical Examiner death investigations for the fiscal year of 1982-83.



The percent in brackets indicates the percentage of victims in the category with a positive blood ethyl alcohol concentration.

SUICIDES

TOTAL NUMBER 1982-83 173

METHOD	1979-80	1980-81	1981-82	1982-83
Poisoning	52	55	50	46
Jump/G.G. Bridge	21	21	18	22
Jump/Bay Bridge	1	0	1	1
Jump/Building	30	13	20	16
Auto/CO	3	7	4	7
Plastic bag	1	0	2	2
Hanging	35	23	27	26
Cutting/stabbing	5	8	8	7
Firearms	47	36	48	36
Drowning	10	6	2	9
Burning	0	3	1	6
Other	2	7	2	1
SEX				
Male	162	128	123	123
Female	46	51	60	50
RACE				
Caucasian	174	142	155	145
Black	17	12	7	12
Asian and Other	17	25	21	16

SUICIDES

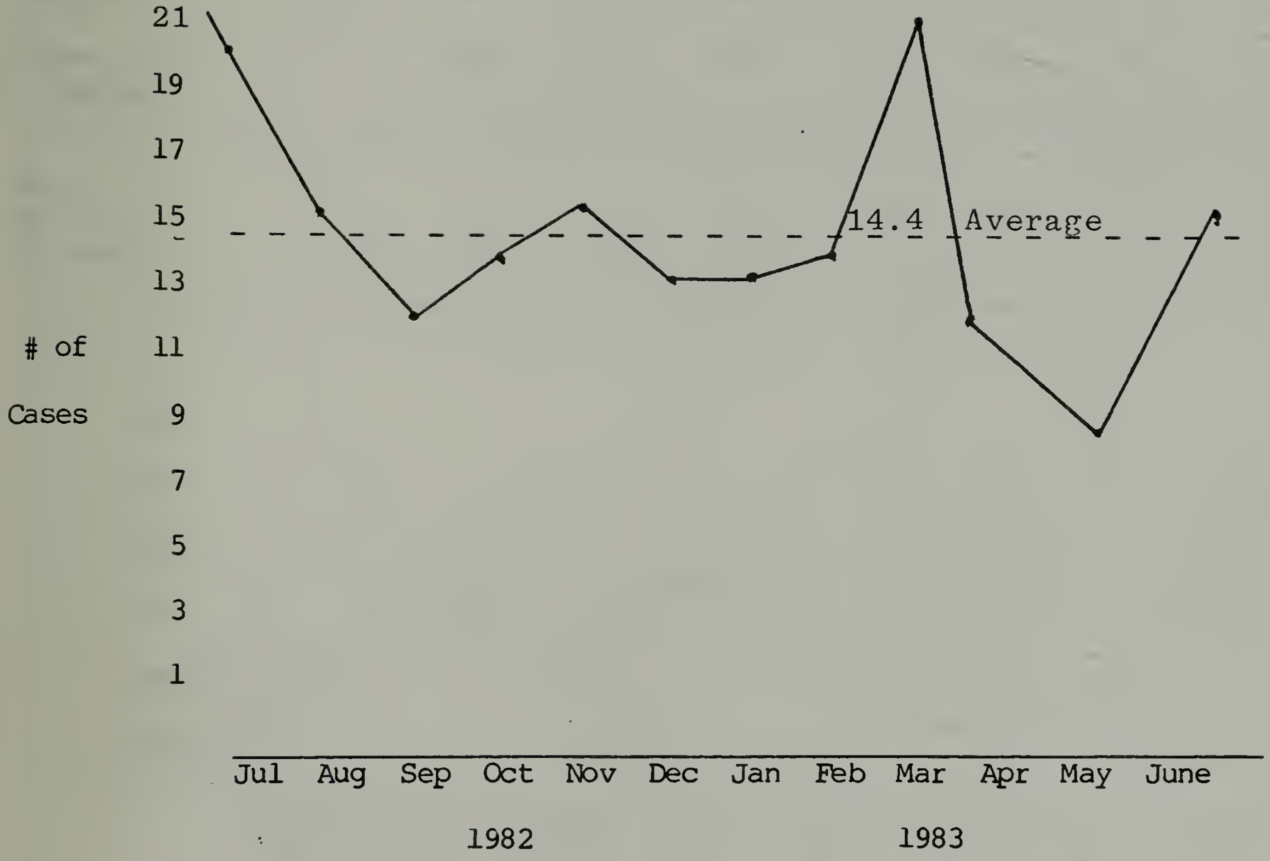
Comparison by Age

Number per Year

Age Range	1978-79	1979-80	1980-81	1981-82	1982-83
0 - 19	6	9	11	7	9
20 - 29	65	60	41	56	37
30 - 39	36	41	41	48	48
40 - 49	34	39	32	26	20
50 - 59	36	19	22	13	20
60 - 69	25	17	13	17	17
70 - 79	18	21	11	12	18
80 - 89	11	11	7	3	9
90 - 99	2	0	1	1	2

SUICIDES

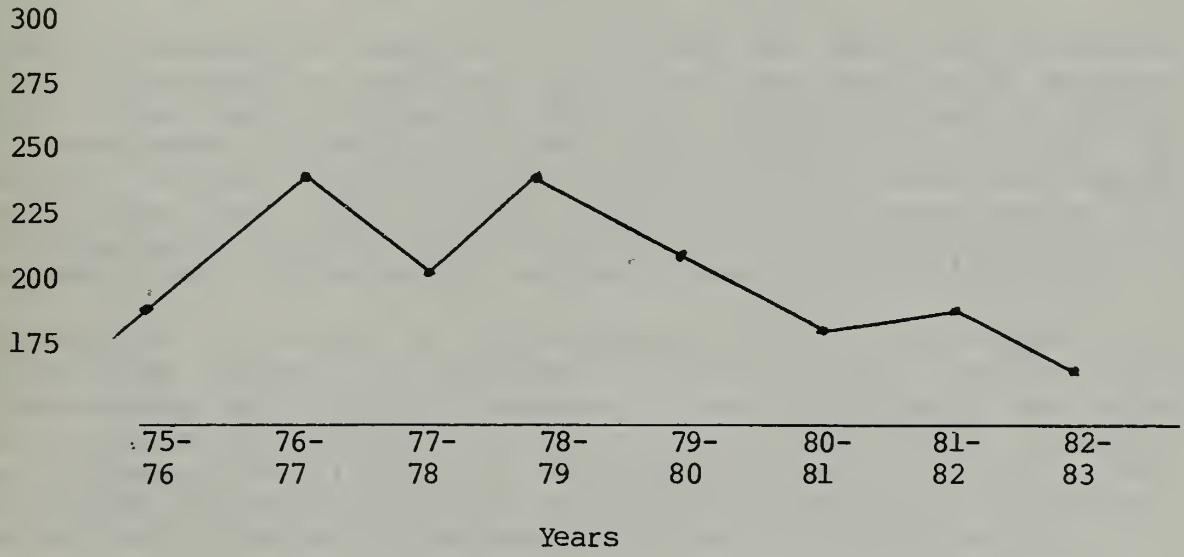
Comparison by Month



SUICIDES

COMPARISON BY YEARS

METHOD	75-76	76-77	77-78	78-79	79-80	80-81	81-82	82-83
Poisoning	56	79	65	83	52	55	50	46
Hand Gun	44	49	35	40	40	31	36	36
Golden Gate Bridge	19	28	18	19	21	21	18	22
Total Suicides by Year	195	233	194	233	208	179	183	173



HOMICIDE

Homicide is the killing of one human by another. Murder is the unlawful killing of a human being with malice. The following data do not differentiate homicide as to whether it is justifiable, accidental or murder. Such distinctions are the proper function of the judicial system and are not the responsibility or function of this office.

Any judicial system dealing with crimes involving death requires a well-trained staff and well-equipped Medical Examiner-Coroner's Office that can and will interpret the forensic findings in an unbiased, fair manner. This investigation must be intense, accurate and rapid enough so that the charges against one or more individuals may be pursued or dismissed without unfairly affecting their constitutional rights. This is the purpose of this office.

The proper evaluation and investigation of a homicide begins, naturally, at the scene. In the majority of cases, a member of this office (either the Coroner's investigator, Administrative Coroner, or Medical Examiner), determines whether a death is a potential homicide. It has been well-documented that, if such a determination is made by an individual inexperienced or untrained in death investigation, his opinion will be wrong in 50% of the cases. Such a person is very apt to miss the subtle homicide and is more inclined to miscall a natural or accidental death as homicide, resulting in false arrest, false accusations, needless expenditure of public funds, waste of investigative time and delay in the investigation of other deaths.

The Coroner's Investigator responds to the scene of death and determines whether the Police Homicide Detail will be called. When homicide is obvious, the Coroner's Investigator responds as part of a team (other members include homicide investigators, photographers and criminologists). This office is responsible for the body, identification, inquiry into circumstances, manner and means of death (Gov. Code 27491.2). Beside the scene investigation, the Coroner's Investigator is responsible for recovering property, locating and notifying next of kin, and preparing a written summary of his investigation.

In about one-third to one-half of the homicides, a forensic pathologist responds to the scene, aiding in the investigation. The subsequent autopsy, including photography, may also use fluoroscopy, X-ray, angiography and other techniques to establish and define the number, nature and severity of wounds, to obtain evidence (i.e. bullets) and to prepare an official report. This report, including chemistry, serology and toxicology results, is used as part of the prosecution or defense of the case in the formal judicial hearing.

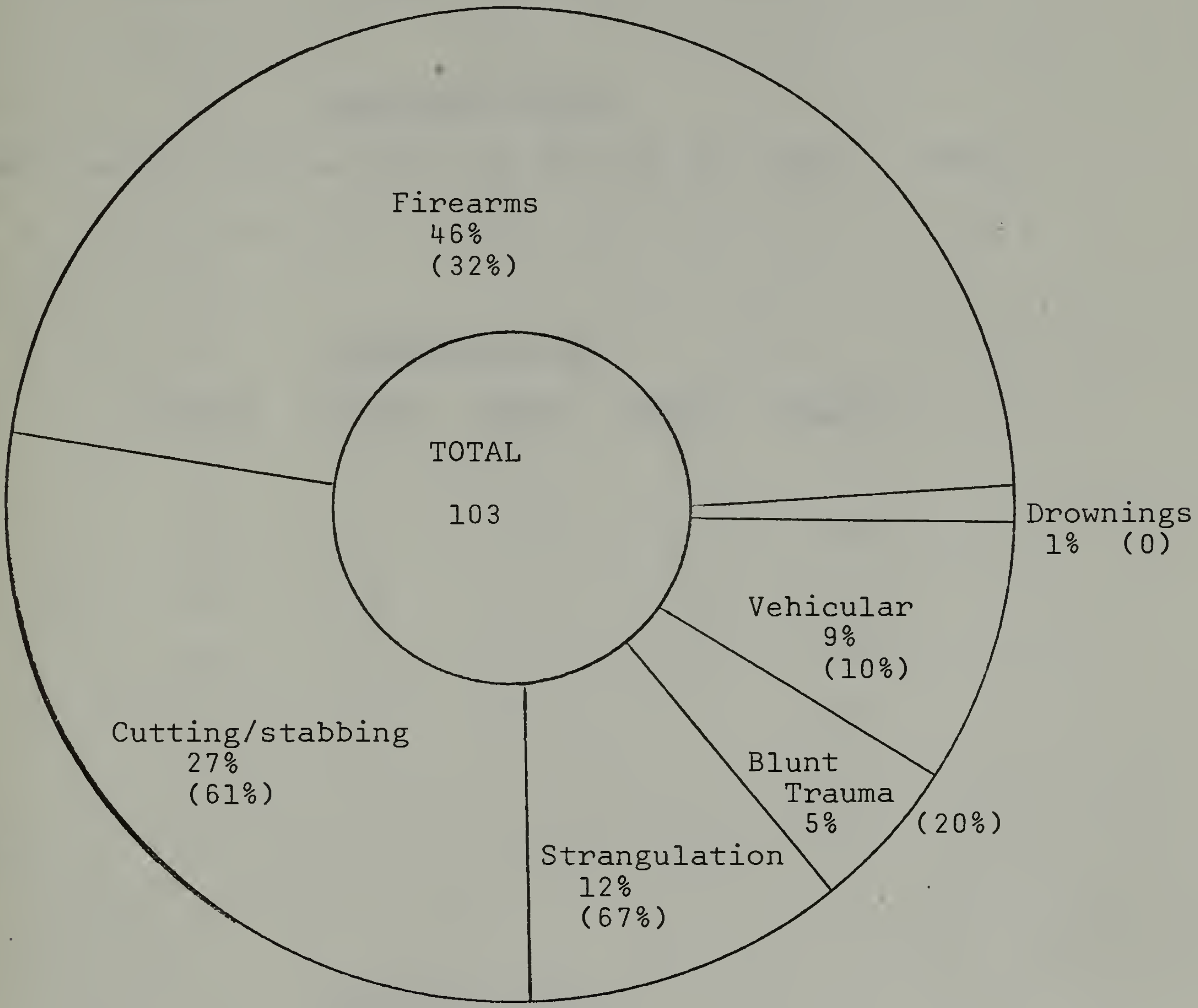
Pertaining to criminal trial, our judicial system requires identification of an individual and presentation of evidence, usually by virtue of expert testimony, relative to the cause of death or trauma associated with death. The Medical Examiner-Coroner's Office identifies the body, frequently relying on local police, CII, or FBI fingerprints. Expert forensic testimony is given by the Forensic Pathologist from this office. In addition, the Forensic Toxicologist is frequently called upon to testify on the significance and effect of

various drug levels, a matter of great importance when dealing with the concept of diminished capacity.

Of minor, but increasing importance, is the fact that, because of our excellent and advanced medical facilities, we are seeing more homicide and trauma cases transferred into the County for medical therapy. Should these individuals die, the autopsy and court testimony are done by this office.

HOMICIDES

Homicides are those deaths caused by another person, generally resulting in murder and manslaughter charges. In San Francisco, 103 homicides occurred in 1982-83, accounting for 6% of the total Medical Examiner investigations.



The percent in brackets indicates the percentage of victims in the category with a positive blood ethyl alcohol concentration.

HOMICIDES

Total Number of Homicides 103

Males 74   Females 29

COMPARISON BY MONTH

JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
9	8	7	10	10	10	7	10	4	7	14	7	103

COMPARISON BY AGE

Age range	1978-79	1979-80	1980-81	1981-82	1982-83
0 - 19	10	9	14	16	7
20 - 29	38	43	41	33	26
30 - 39	19	28	29	36	30
40 - 49	16	11	14	18	16
50 - 59	9	9	14	16	16
60 - 69	5	9	9	6	6
70 and above	6	5	4	7	2

COMPARISON BY RACE

Caucasian.	62
Black.	31
Asian and Other. .	10

HOMICIDE

COMPARISON BY METHOD

Method	Number	Alcohol*	Drugs**
Blunt trauma	5	20%	0%
Cutting/stabbing	28	61%	0%
Firearms	47	32%	11%
Strangulation	12	67%	0%
Vehicular	10	10%	0%
Drowning	1	0%	0%

* Refers to percentage of victims (of those tested) with positive blood ethyl alcohol concentrations

** Refers to percentage of victims (of those tested) with positive blood drug abuse levels (heroin, cocaine, and/or amphetamines)

PATHOLOGY

In the Pathology department, the tissue and body fluid samples taken at autopsy are prepared for microscopic study, histochemically stained, or analyzed for chemical constituents. Cardiac pacemakers or other mechanical life-support devices are examined for any defect. Smears or "wet-mounts" are examined for spermatozoa, bacteria, or tuberculosis. Bacteriologic cultures may be taken, but, if pathogens are grown, they are usually sent to the Department of Public Health (state or local) for further identification. If indicated, "soft" X-rays or histochemical tests are done to establish entrance or exit gunshot wounds. Here, also, research techniques such as methods of obtaining fingerprints from the skin of a victim, are developed.

MONTHLY FIGURES

1982-1983

PATHOLOGY*

R	TOTAL CORONER'S CASES	CASES REFERRED TO PATHOLOGIST	NO. OF ORGANS SUBMITTED	NO. OF SECTIONS TAKEN	HISTO-PATHOLOGIC SLIDES MADE	SPECIAL STAINS **	BLOOD GROUPINGS ***	OTHER DETERMINA-TIONS ****
2								
	145	91	719	1714	342	23	7	74
	152	99	867	2145	430	20	12	151
	134	100	732	1729	384	14	4	137
	155	82	1479	3773	780	27	17	160
	168	106	962	2309	435	28	3	79
	176	107	935	2236	425	22	21	238
3								
	133	72	656	1655	342	32	11	187
	151	83	733	1772	348	7	8	172
	151	92	699	2252	426	7	7	217
	143	80	437	1811	407	12	21	148
	161	90	624	2054	414	12	21	148
	137	82	545	1952	455	16	8	77
ALS	1432	1184	9388	25402	5178	231	133	1833

* These figures do not reflect photography, forensic radiology, or material prepared for teaching forensic pathology

** Includes smears examined for bacteria and spermatazoa

*** ABO nd Anti-Rh

**** Blood, urine, water, evidence for: hematology, biochemistry, urinalysis, bacteriology, serology, "Sickledix," etc.

TOXICOLOGY

Toxicology is the science that deals with the detection and identification of drugs and poisons. In our work, any possible agent may be of importance in a death. The most common poisons in our community are prescription items. Other common agents are illegal drugs (street drugs), industrial compounds, certain gases and alcohol.

It is necessary not only to accurately detect and identify the agent or agents involved in a case, but to quantitate them precisely so that their exact relationship to the death, if any, can be evaluated. This determination must be as precise and specific as scientifically possible, and it must be able to stand up to review by any other qualified laboratory in the nation.

As a routine part of our work, we determine the levels of drugs in two or more body "compartments" such as blood and stomach contents, or combinations of three compartments, in order to answer the question of acute or chronic drug usage. This is of utmost importance in determining the time of ingestion, and therefore the intent of the ingestion - whether accidental or suicidal. Since the types and natures of the unidentified compounds can be so varied, the capabilities of this department must also be varied.

Extensive research is performed in this department, some of which deals with means of identifying unknown compounds in post-mortem samples. A current project is concerned with determining the types of drutgs and their levels in both the victim and suspect in certain serious crimes. This information is then available to the courts to aid in the just determination of the innocence or guilt of the person charged with the crime.

TOXICOLOGY

July 1982 - June 1983

Incidence of various drugs or poisons found singly or in combination:

The drugs listed are not necessarily the cause of death or even a contributing cause. These figures reflect toxic agents present in the body to any degree. Any one case may have more than one drug or poison present. Also, the drugs/poisons listed may fit into more than one category and have been placed in a specific class on the basis of their most common usage.

ABUSE DRUGS

Alkaloids of morphine	50
Amphetamine	17
Cocaine	22
Codeine	24
Methamphetamine	19
Methaqualone (Quaalude)	1
Phencyclidine (PCP)	1

ANALGESICS

Non-Narcotic

Acetaminophen	15
Salicylate	21
Zomepirac (Zomax)	1

Narcotic

Hydromorphone (Dilaudid)	1
Meperidine (Demerol)	1
Methadone	1
Propoxyphene (Darvon)	5
Pentazocine (Talwin)	1
Propoxyphene (Darvon)	5
Pentazocine (Talwin)	1

ANTI-ARRHYTHMICS, CARDIAC

Lidocaine	23
Propranolol (Inderal)	3
Qinidine/quinine	2

ANTI-CONVULSANTS

Phenytoin	5

ANTI-DEPRESSANTS

Tricyclic Type

Desipramine (Norpramine)	3
Doxepin (Sinequan)	4
Imipramine (Tofranil)	4
Nortriptyline (Aventyl)	3

Non-Tricyclic type

Amitriptyline (Elavil)	23
Amoxapine (Asendin)	2
Lithium	1
Loxapine (Loxitane)	2

ANTIHISTAMINES

Diphenhydramine	3
Doxylamine	2
Meclazine	1

HYPOGLYCEMIC AGENTS

Insulin	1

MISCELLANEOUS

Cyanide	2
Digoxin	1
THC	1
Theophylline	3

SEDATIVE-HYPNOTIC DRUGS

Barbiturates

Amobarbital	2
Pentobarbital	6
Phenobarbital	9
Secobarbital	8

Non-barbiturates

Chloral hydrate	8
Ethchlorvynol (Placidyl)	2
Flurazepam (Dalmane)	12
Glutethimide (Doriden)	1

TRANQUILIZERS, MINOR

(Used to treat anxiety)

Benzodiazepines

Chlordiazepoxide (Librium)	4
Diazepam (Valium)	9

TRANQUILIZERS, MAJOR

(Used to treat psychosis)

Phenothiazine derivatives

Chlorpromazine (Thorazine)	3
Thioridazine (Mellaril)	4
Trifluoperazine (Stelazine)	1
Fluphenazine (Prolixin)	1

Non-phenothiazines

Haloperidol (Haldol)	1

VOLATILE AGENTS AND GASES

Acetone	3
Carbon monoxide	18
Freon-12	1
Isopropyl alcohol	1
Methane	1

TOXICOLOGY

1982-1983

Year/ Month	No. of Cases Referred to Toxicology	No. of Specimens Received	No. of Tests Performed	Alcohol Tested	Alcohol Pos.	Barbiturates Tested	Barbiturates Pos.
1982							
JUL	143	695	368	95	28	35	1
AUG	152	739	304	77	25	49	2
SEP	126	601	303	86	28	40	2
OCT	135	656	436	134	32	43	1
NOV	169	895	628	169	36	51	3
DEC	178	879	481	177	31	52	3
1983							
JAN	155	766	506	155	25	29	4
FEB	132	679	416	130	33	19	3
MAR	144	767	516	144	26	30	2
APR	133	706	538	133	24	31	3
MAY	145	761	586	144	30	33	1
JUN	136	711	558	135	31	38	0
TOTAL	1741	8855	9598	1579	349	450	25

HEROIN DEATHS

Morphine-type alkaloid (Heroin) deaths.	19

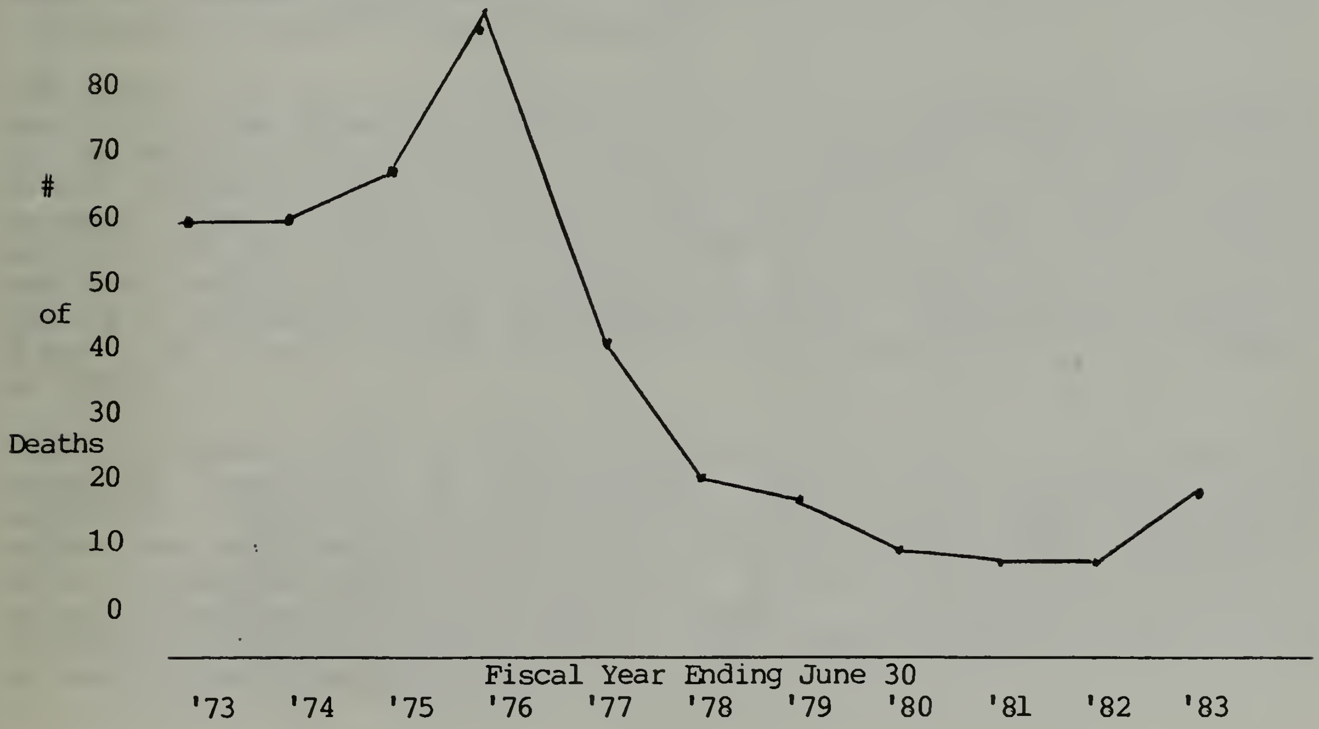
Sex Distribution	Male	18	(95%)
	Female	1	(5%)

Racial Distribution	Caucasian	16	(84%)
	Black	2	(10%)
	American Indian	1	(5%)

Age Distribution

16-20	21-35	26-30	31-35	36-40	41-over
2	1	5	4	4	3

TEN YEAR COMPARISON OF HEROIN DEATHS



The data presented on the graph indicate an increase in the heroin-related deaths in San Francisco for the first time in six years. This year's figure (19) is more than double the total (9) for last fiscal year.

RESEARCH AND SPECIAL PROJECTS

The San Francisco Medical Examiner-Coroner's Office was awarded a federal contract in September 1978, from the National Institutes of Child Health and Human Development, to set up and maintain a coordinating pathology laboratory as part of a nation-wide collaborative study on Sudden Infant Death Syndrome (SIDS). The aim of this study is to determine specific diagnostic criteria and possibly to establish risk factors for SIDS. This contract is funded currently at a level of $372,609. and will continue to December, 1982. Tissue specimens, death investigative reports, and autopsy reports from 978 cases of infant death were submitted to this office from Coroner's offices throughout the United States. From the tissues submitted on each case, a set of microscope slides was prepared in a standardized manner. A total of 23,729 microscope slides were prepared. The slide sets were examined by three pathologists, experienced in SIDS diagnosis, who each submitted an independent opinion as to the cause of death on each case. A "second review" is now in progress in which the three pathologists are re-reviewing their microscopic findings on each case in conjunction with the autopsy and death investigative reports. The final cause of death will be established by this "second review". Data are being collected and coded for computer input at the Data Coordinating Center at the University of Washington in Seattle. The research coordinator, Dr. Donna Allison, attended the American Pediatric Society meeting in Washington, D.C. in May, 1982 at which preliminary data from this study were presented. She will also attend and present a paper at the American Public Health Association meeting in November, 1982 in Montreal, Canada. This contract has provided employment for 11 people since its inception. Two people are now working part-time on this project.

This office was also the recipient of a federal grant, funded with LEAA monies, received through the Office of Criminal Justice Planning in Sacramento and the Mayor's Criminal Justice Council in San Francisco. This project, entitled "Forensic Serology and Toxicology Analysis" was funded through September, 1980. Starting October 1, 1980, funding for this project has been provided from the General Fund with the understanding that all efforts will be made to generate revenue to compensate for these funds by fee-for service testing of specimens received from outside counties. Employment for 3 people, 2 part-time, 1 full-time, was provided on this project during the fiscal year of 1981-82.

A special project (11550) is being performed by this office, in particular the Toxicology department, in collaboration with the San Francisco Police Department. Individuals who are suspected of being under the influence of opiates are being detained by the police. With informed consent, urine specimens are obtained from these individuals. The urine samples are then screened in this office for the presence of opiates. Test results concerning the presence or absence of opiates in urine at the time of specimen collection may be admitted into court proceedings.

GLOSSARY

ALKALOID OF MORPHINE GROUP	Typically referred to as morphine-type alkaloid, this is the chemical substance found in body fluids after the injection of heroin or other drugs derived from opium
TOXICOLOGY NOT VALID OR ELIMINATED	This term indicates that the deceased lived long enough after the injury to have eliminated some or all toxic agents from the body
FORENSIC PATHOLOGY	The specialty field of medicine involving the application of medical and pathology principles in determining the cause and manner of sudden, unexpected, and medically unattended deaths. This includes the type and nature of injury, public health hazards, type or nature of homicide weapon, the relation of injury to death and interpreting other factors for the court. These data are prepared and presented to the judicial system or public health interests in keeping with the best available knowledge
MODE OF DEATH	Indicates the manner of death, such as natural, accident, suicide or homicide, and is to be distinguished from cause of death, which is purely a medical determination
MODE EQUIVOCAL	With the cause of death undetermined, investigative data do not clearly differentiate between two modes of death, although some evidence supports either one
MODE UNDETERMINED	With the cause of death determined, investigative data do not clearly support one of two possible modes and either one is possible without prejudice
MODE UNKNOWN	Circumstances insufficient to indicate between two possible modes, as when only bones are found, or when no medical cause of death is determined
PATHOLOGY	That branch of medicine which deals with the essential nature of disease, especially in the structural or functional changes in tissues, organs or systems of the body causing disease. It involves the diagnosis of disease by microscopic or chemical analysis
SEROLOGY	That branch of pathology which deals with the analysis of blood and body fluids. Blood types for identification, exclusion of a suspect or judicial purposes are examples of the use in this office

TOXICOLOGY	The scientific study of poisons, their detection, actions and treatment. The relationship of drug levels to emotional or personality change, behavioral or reasoning ability are frequent decisions based on these data
MEDICAL EXAMINER	A physician specifically trained in forensic pathology who is responsible for investigating and determining the cause and manner of sudden or unexpected death
AUTOPSY	A scientific dissection of the human body to determine the cause and nature of death in order to detect public health hazards, determine the method or type of death in homicides and improve the level of medical care in the community. In some cases, showing that no injury or wrongdoing was present is of great emotional and stabilizing value to the family

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